DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

August 12, 2003

REPLY TO
ATTENTION OF

TO Air Force MATOC Contractors:

Contract No. DACA67-00-D-0201: Mr. Barry Pugh, Mooney and Pugh Contractors, Inc., P. O. Box 11737, Spokane, WA 99221-1737 (5307 E. Cateldo, Spokane, WA 99212-0929) (bpugh@MooneyandPugh.com; cyost@mooneyandpugh.com)
ph: (509) 535-8874; fax: (509)-535-7251

Contract No. DACA67-00-D-0202: Mr. Clayton Record, Record Steel and Construction, Inc., 1854 East Lanark Street, Meridian, ID 83642-5924 (robin@rscigroup.com; clayton@rscigroup.com) ph: (208) 887-1401 x112; fax: (208) 888-9130

Contract No. DACA67-00-D-0203: Mr. Wade Perrow, Wade Perrow Construction, Inc., P. O. Box 1728, Gig Harbor, WA 98335-3728 (10421 Burnham Drive NW, Gig Harbor, WA 98332) (wade@wpconstruction.com; carole@wpconstruction.com)
ph: (253) 851-9309; fax: (253) 851-6475

Gentlemen:

Please reference Request for Proposals (RFP) No. DACA67-03-T-2002, entitled Renovate Buildings 1170, 1205, and 1207 at McChord Air Force Base available for downloading from the following website:
http://www.nws.usace.army.mil/ct/ebs/ViewprivateSolicitation.asp?SolicitationNumber=DACA67-03-T-2002.

This letter constitutes amendment R0003 to the solicitation dated 23 July 2003. This amendment incorporates the following revisions:

1. Section 00800:

   (a) Revisions to Drawing Sheets A-2 and A-3 by notation

   (b) Revision to Sheet A-19 by addition of Sketch A19/SD-1 at the end of the section

2. General Specifications:

   (a) Revisions to Section 01000 Scope of Work regarding fire sprinkler system, fire extinguishers, and cable hardware and testing

   (b) Revisions to Section 01025 Payment to add 0030 Optional Item – Design, Furnish, and Install Dry Pipe Sprinkler System

3. Specifications for Building 1170:

(a) Revisions to Section 05500 Miscellaneous Metal

4. Specifications for Building 1205:

(a) Revisions to Section 05500 Miscellaneous Metal

(b) Revisions to Section 13930 Fire Sprinkler System

5. Specifications for Building 1207:

(a) Revisions to Section 05500 Miscellaneous Metal

6. Schedule:

(a) Revisions to add 0030 Optional Item – Design, Furnish, and Install Dry Pipe Sprinkler System in Attic Space

7. Publish the Attendance List from the 31 July 2003 Site Visit.

8. Publish Questions and Answers as a result of the 31 July 2003 Site Visit. The questions and answers are for informational purposes only. The questions and answers in no way change the specifications and drawings unless specified in an amendment.

MATOC offerors must acknowledge receipt of the amendment by number and date issued on the cover letter provided with their proposals.

Sincerely,

SUSAN K. SHERRELL

Contracting Officer

Enclosures:
1. Revised Schedule
2. Revised Section 00800
3. Revised General Specifications
   (a)Section 01000
   (b) Section 01025
4. Revised Specifications for Building 1170
   (a) Section 05500
5. Revised Specifications for Building 1205
   (a) Section 05500
   (b) Section 13930
6. Revised Specifications for Building 1207
   (a) Section 05500

7. Attendance List from 31 July 2003 Site Visit
8. Questions and Answers as a Result of Site Visit

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SCHEDULE

RENOVATE BUILDINGS 1170, 1205 AND 1207

Item No.	Description of Item	Quantity	Unit	Unit Price	Amount
	BASE ITEMS				
0001	All Work to Renovate Bldg. 1170 except for Items 0013 through 0022	1	JOB	L.S.	$_____
0002	All Work to Renovate Bldg. 1205 except for Items 0023 through 0029	1	JOB	L.S.	$_____
0003	All Work for As-Built Drawings as Specified in Section 01702 from Preparation to Final Approval for Base Items and any Optional Items Exercised	1	JOB	L.S.	$25,000
0004	All Work for O&M Manuals as Specified in Section 01701 from Preparation to Final Approval for Base Items and any Optional Items Exercised	1	JOB	L.S.	$60,000
0005	All Work for Form 1354 Checklist and Equipment in Place List as Specified in Sections 01704 and 01705 from Preparation to Final Approval for Base Items and any Optional Items Exercised	1	JOB	L.S.	$12,000
			TOTAL BASE ITEMS		$_____
	OPTIONAL ITEMS				
	(BLDG. 1207)				
0006	All Work to Renovate Bldg. 1207 except for Items 0007 through 0012	1	JOB	L.S.	$_____
0007	Install Metering for Bldg. 1207	1	JOB	L.S.	$_____
0008	Connect the DDC to the EMS for Bldg. 1207	1	JOB	L.S.	$_____
0009	Install Interior Signage in Bldg. 1207	1	JOB	L.S.	$_____
0010	Install Laminated Shelving in Room 119 for Bldg. 1207	1	JOB	L.S.	$_____
0011	Install Emergency Power Inverter for Bldg. 1207	1	JOB	L.S.	$_____
0012	Install Exterior Primary Power and Transformer for Bldg. 1207	1	JOB	L.S.	$_____
	(BLDG. 1170)				
0013	Install Metering for Bldg. 1170	1	JOB	L.S.	$_____
0014	Connect the DDC to the EMS for Bldg. 1170	1	JOB	L.S.	$_____
0015	Install Interior Signage in Bldg 1170	1	JOB	L.S.	$_____

Item No.	Description of Item	Quantity	Unit	Unit Price	Amount
0016	Installation of New Canopies for Bldg. 1170	1	JOB	L.S.	$_____
0017	Installation of Metal Wainscot in the Open Hangar Area for Bldg. 1170	1	JOB	L.S.	$_____
0018	Installation of New 16' X 16' Roll-Up Door for Bldg. 1170	1	JOB	L.S.	$_____
0019	Demolition of Existing Sliding Door and Replacement with Metal Siding for Bldg. 1170	1	JOB	L.S.	$_____
0020	Replace Five Exit Doors for Bldg. 1170	1	JOB	L.S.	$_____
0021	Installation of Emergency Power Inverter for Bldg 1170	1	JOB	L.S.	$_____
0022	Installation of New High Bay Lighting for Bldg 1170	1			
	(BLDG. 1205)				
0023	Install Metering for Bldg 1205	1	JOB	L.S.	$_____
0024	Connect the DDC to the EMS for Bldg. 1205	1	JOB	L.S.	$_____
0025	Install Interior Signage in Bldg. 1205	1	JOB	L.S.	$_____
0026	Install Raised Floor System in Bldg 1205	1	JOB	L.S.	$_____
0027	Install Movable Partition in Rooms 121 and 122 in Bldg 1205	1	JOB	L.S.	$_____
0028	Replace Motor on AHU-1 in Bldg. 1205	1	JOB	L.S.	$_____
0029	Install Emergency Power Inverter in Bldg 1205	1	JOB	L.S.	$_____
0030	Design, Furnish and Install Dry Pipe Sprinkler System in Attic Space	1	JOB	L.S.	$_____

TOTAL OPTIONAL ITEMS (BLDG 1207) $_____

TOTAL OPTIONAL ITEMS (BLDG 1170) $_____

TOTAL OPTIONAL ITEMS (BLDG. 1205) $_____

TOTAL OPTIONAL ITEMS $_____

TOTAL BASE AND OPTIONAL ITEMS $_____

NOTE: The dollar amounts established in Items No. 0003, 0004 and 0005 shall not be revised by bidders.

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SPECIAL CLAUSES

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SECTION 00800

SPECIAL CLAUSES

SC-1. COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK (APR 1984) (FAR 52.211-10)

The Contractor shall be required to (a) commence work under this Contract within 10 calendar days after the date the Contractor receives the notice to proceed (NTP), (b) prosecute the work diligently, and (c) complete the entire work ready for use within the times indicated in the table below (total time = 780 calendar days). The times stated for completion shall include final cleanup of the premises for that portion of the work. See Section 01005 Site Specific Supplementary Requirements, Paragraph 1.6 CONSTRUCTION PHASING.

CONSTRUCTION COMPLETION SCHEDULE

WORK ITEM	TIME FOR COMPLETION (NLT)
(a) All Work for Base Item 0001 and Optional Items 0013 through 0022 (if awarded)	267 calendar days after date of receipt by Contractor of the notice to proceed for Base Item 0001
(b) All work for Base Item 0002 and Optional Items 0023 through 0029 (if awarded)	275 calendar days after date of receipt by Contractor of the notice to proceed for Base Item 0002
(c) All work for Optional Items 0006 through 0012 (if awarded)	238 calendar days after date of receipt by Contractor of the notice to proceed for Optional Item 0006

SC-1.1 OPTION FOR INCREASED QUANTITY

a. The Government may increase the quantity of work awarded by exercising one or more of the Optional Bid Items 0006 through 0029 at any time, or not at all, but no later than as shown in the table below. Notice to proceed on work Items added by exercise of the options will be given upon execution of consent of surety.

Item	Optional Item Award
(1) Optional Items 0006 through 0012 (if awarded)	NLT 31 December 2003
(2) Optional Items 0013 through 0022 (if awarded)	NLT 90 calendar days after award of Base Item 0001
(3) Optional Items 0023 through 0029 (if awarded)	NLT 90 calendar days after award of Base Item 0002

NOTE: NTL = Not Later Than

b. The parties hereto further agree that any option herein shall be considered to have been exercised at the time the Government deposits written notification to the Contractor in the mails.

c. The time allowed for completion of any optional Items awarded under this contract will be the same as that for the base Item.

SC-2. LIQUIDATED DAMAGES - CONSTRUCTION (SEP 2000) (FAR 52.211-12)

(a) If the Contractor fails to complete the work within the time specified in the Special Clause SC-1, or any extension, the Contractor shall pay to the Government as liquidated damages, the sum shown in the schedule below for each day of delay.

(1) For work specified in SC-1(a)	$773.00
(2) For work specified in SC-1(b)	$773.00
(3) For work specified in SC-1(c)	$773.00

(b) Liquidated damages under this contract shall in no event be cumulative and shall not exceed a total of $773.00 per day, even if the Contractor is delinquent in completing more than one of the items of work at any given time.

(c) If the Government terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the Government in completing the work.

(d) If the Government does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the work is completed or accepted.

SC-3. TIME EXTENSIONS (APR 1984) (FAR 52.211-13) Notwithstanding any other provisions of this Contract, it is mutually understood that the time extensions for changes in the work will depend upon the extent, if any, by which the changes cause delay in the completion of the various elements of construction. The change order granting the time extension may provide that the Contract completion date will be extended only for those specific elements so delayed and that the remaining Contract completion dates for all other portions of the work will not be altered and may further provide for an equitable readjustment of liquidated damages under the new completion schedule.

SC-4. DELETED.

SC-5. INSURANCE - WORK ON A GOVERNMENT INSTALLATION (JAN 1997) (FAR 52.228-5)

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance period of this Contract at least the kinds and minimum amounts of insurance required in the Insurance Liability Schedule or elsewhere in the Contract.

(b) Before commencing work under this Contract, the Contractor shall certify to the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective:

(1) for such period as the laws of the State in which this Contract is to be performed prescribe; or

(2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

(c) The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this Contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the Contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

SC-5.1 REQUIRED INSURANCE IN ACCORDANCE WITH FAR 28.307-2

(1) Workers' compensation and employer's liability. Contractors are required to comply with applicable Federal and State workers' compensation and occupational disease statutes. If occupational diseases are not compensable under those statutes, they shall be covered under the employer's liability section of the insurance policy, except when Contract operations are so commingled with a Contractor's commercial operation that it would not be practical to require this coverage. Employer's liability coverage of at least $100,000 shall be required, except in states with exclusive or monopolistic funds that do not permit workers' compensation to be written by private carriers.

(2) General Liability.

(a) The Contracting Officer shall require bodily injury liability insurance coverage written on the comprehensive form of policy of at least $500,000 per occurrence.

(b) Property damage liability insurance shall be required only in special circumstances as determined by the agency.

(3) Automobile liability. The Contracting Officer shall require automobile liability insurance written on the comprehensive form of policy. The policy shall provide for bodily injury and property damage liability covering the operation of all automobiles used in connection with performing the Contract. Policies covering automobiles operated in the United States shall provide coverage of at least $200,000 per person and $500,000 per occurrence for bodily injury and $20,000 per occurrence for property damage. The amount of liability coverage on other policies shall be commensurate with any legal requirements of the locality and sufficient to meet normal and customary claims.

(4) Aircraft public and passenger liability. When aircraft are used in connection with performing the Contract, the Contracting Officer shall require aircraft public and passenger liability insurance. Coverage shall be at least $200,000 per person and $500,000 per occurrence for bodily injury, other than passenger liability, and $200,000 per occurrence for property damage. Coverage for passenger liability bodily injury shall be at least $200,000 multiplied by the number of seats or passengers, whichever is greater.

(5) Environmental Liability If this contract includes the transport, treatment, storage, or disposal of hazardous material waste the following coverage is required.

The Contractor shall ensure the transporter and disposal facility have liability insurance if effect for claims arising out of the death or bodily injury and property damage from hazardous material/waste transport, treatment, storage and disposal, including vehicle liability and legal defense costs in the amount of $1,000,000.00 as evidenced by a certificate of insurance for General, Automobile, and Environmental Liability Coverage. Proof of this insurance shall be provided to the Contracting Officer.

SC-6. DELETED.

SC-7. PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984) (FAR 52.236-1): The Contractor shall perform on the site, and with its own organization, work equivalent to at least fifteen percent (15%) of the total amount of work to be performed under the Contract. The percentage may be reduced by a supplemental agreement to this Contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government.

SC-8. PHYSICAL DATA (APR 1984) (FAR 52.236-4): Data and information furnished or referred to below is for the Contractor's information. The Government will not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

(a) Physical Conditions: The indications of physical conditions on the drawings and in the specifications are the result of site investigations by test holes shown on the drawings.

(b) Weather Conditions: Each bidder shall be satisfied before submitting his bid as to the hazards likely to arise from weather conditions. Complete weather records and reports may be obtained from any National Weather Service Office.

(c) Transportation Facilities: Each bidder, before submitting his bid, shall make an investigation of the conditions of existing public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress at the jobsite. The unavailability of transportation facilities or limitations thereon shall not become a basis for claims for damages or extension of time for completion of the work.

SC-9. DELETED.

SC-10. LAYOUT OF WORK (APR 1984) (FAR 52.236-17): The Contractor shall lay out its work from Government-established base lines and bench marks indicated on the drawings, and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the Contracting Officer until authorized to remove them. If such marks are destroyed by the Contractor or through its negligence before their removal is authorized, the Contracting Officer may replace them and deduct the expense of the replacement from any amounts due, or to become due, to the Contractor.

SC-11 THROUGH SC-13 DELETED.

SC-14. EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE (MAY 1999)-(EFARS 52.231-5000)

(a) This clause does not apply to terminations. See 52.249-5000, Basis for Settlement of Proposals and FAR Part 49.

(b) Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule, Region VIII Oregon, Washington & Idaho. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the contracting officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time the work was performed shall apply.

(c) Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

(d) When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the contracting officer shall request the contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet.

(e) Copies of EP1110-1-8 “Construction Equipment Ownership and Operating Expense Schedule” Volumes 1 through 12 are available in Portable Document Format (PDF) and can be viewed or downloaded at http://www.usace.army.mil/inet/usace-docs/eng-pamplets/cecw.htm. A CD-ROM containing (Volumes 1-12) is available through either the Superintendent of Documents or Government bookstores. For additional information telephone 202-512-2250, or access on the Internet at http://www.access.gpo.gov/su_docs.

SC-15. PAYMENT FOR MATERIALS DELIVERED OFF-SITE (MAY 1999)-(EFARS 52.232-5000)

(a) Pursuant to FAR clause 52.232-5, Payments Under Fixed Priced Construction Contracts, materials delivered to the contractor at locations other than the site of the work may be taken into consideration in making payments if included in payment estimates and if all the conditions of the General Provisions are fulfilled. Payment for items delivered to locations other than the work site will be limited to: (1) materials required by the technical provisions; or (2) materials that have been fabricated to the point where they are identifiable to an item of work required under this contract.

(b) Such payment will be made only after receipt of paid or receipted invoices or invoices with canceled check showing title to the items in the prime contractor and including the value of material and labor incorporated into the item. In addition to petroleum products, payment for materials delivered off-site is limited to the following items: Any other construction material stored offsite may be considered in determining the amount of a progress payment.

SC-16 THROUGH SC-21 DELETED.

SC-22. RECOVERED MATERIALS: The Corps of Engineers encourages all bidders to utilize recovered materials to the maximum extent practicable. The attached APPENDIX R contains procurement guidelines for products containing recovered materials.

APPENDIX R

PART 247 - COMPREHENSIVE PROCUREMENT GUIDELINE FOR PRODUCTS CONTAINING RECOVERED MATERIALS

40 CFR Ch. 1 (9-1-99 Edition)

Subpart B-Item Designations

§ 247.10 Paper and paper products.

Paper and paper products, excluding building and construction paper grades.

§ 247.11 Vehicular products.

(a) Lubricating oils containing re-refined oil, including engine lubricating oils, hydraulic fluids, and gear oils, excluding marine and aviation oils.
(b) Tires, excluding airplane tire
(e) Reclaimed engine coolants, excluding coolants used in non-vehicular applications.

247.12 Construction products.

(a) Building insulation product including the following items:
(1) Loose-fill insulation, including but not limited to cellulose fiber, mineral fibers (fiberglass and rock vermiculite, and perlite;
(2) Blanket and batt insulation, including but not limited to mineral fibers (fiberglass and rock wool).
(3) Board (sheathing, roof decking wall panel) insulation, including but not limited to structural fiberboard and laminated paperboard products perlite composite board, polyurethane, polyisocyanurate, polystyrene, phenolics, and composites; and
(4) Spray-in-place insulation, including but not limited to foam-in-place polyurethane and polyisocyanurate and spray-on cellulose.
(b) Structural fiberboard and laminated paperboard products for applications other than building insulation, including building board, sheathing shingle backer, sound deadening board, roof insulating board, insulating wallboard, acoustical and non-acoustical ceiling tile, acoustical and non-acoustical lay-in panels, floor underlayments, and roof overlay (cover board).
(c) Cement and concrete, including concrete products such as pipe and block, containing coal fly as ground granulated blast furnace (GGBF) slag.
(d) Carpet made of polyester fiber use in low- and medium-wear applications.
(e) Floor tiles and patio block containing recovered rubber or plastic.
(f) Shower and restroom dividers/partitions containing recovered plastic or steel.
(g) (1) Consolidated latex paint used for covering graffiti; and
(2) Reprocessed latex paint used for interior and exterior architectural applications such as wallboard, ceilings, and trim; gutter boards; and concrete, stucco, masonry, wood and metal surfaces.

§247.13 Transportation products.

(a) Traffic barricades and traffic cones used in controlling or restricting vehicular traffic.

(b) Parking stops made from concrete or containing recovered plastic or rubber.
(c) Channelizers containing recovered plastic or rubber.
(d) Delineators containing recovered plastic, rubber, or steel.
(e) Flexible delineators containing recovered plastic.

§ 247.14 Park and recreation products

(a) Playground surfaces and running tracks containing recovered rubber or plastic.
(b) Plastic fencing containing recovered plastic for use in controlling snow or sand drifting and as a warning/safety barrier in construction or other applications.

247.15 Landscaping products.

(a) Hydraulic mulch products containing recovered paper or recovered wood used for hydroseeding and as an over-spray for straw mulch in landscaping, erosion control, and soil reclamation.
(b) Compost made from yard trimmings, leaves, and/or grass clippings for use in landscaping, seeding of grass or other plants on roadsides and embankments, as a nutritious mulch under trees and shrubs, and in erosion control and soil reclamation.
(c) Garden and soaker hoses containing recovered plastic or rubber.
(d) Lawn and garden edging containing recovered plastic or rubber.

§ 247.16 Non-paper office product.

(a) Office recycling containers and office waste receptacles.
(b) Plastic desktop accessories.
(c) Toner cartridges.
(d) Binders.
(e) Plastic trash bags.
(f) Printer ribbons.
(g) Plastic envelopes.

§ 247.17 Miscellaneous products.

Pallets containing recovered wood, plastic, or paperboard.

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McChord Air Force Base, Washington

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7	A-5	2nd Floor New Work Plan		03JUN9
8	A-6	Exterior and Interior Elevations, Sections and Details		03JUN9
9	A-7	Enlarged Plans, Elevations, Sections and Details		03JUN9
10	A-8	Enlarged Toilet Plan, Elevations and Sections		03JUN9
11	A-9	1st Floor Reflected Ceiling Plan		03JUN9
12	A-10	2nd Floor Reflected Ceiling Plan		03JUN9
13	A-11	Wall Types		03JUN9
14	A-12	Wall Types		03JUN9
15	A-13	1st Floor Color Zone Key Plan – Structural Interior Design		03JUN9
16	A-14	2nd Floor Color Zone Key Plan – Structural Interior Design		03JUN9
17	A-15	Finish Schedule and Finish Specifications – Structural Interior Design		03JUN9
18	A-16	1st Floor Furniture Plan - Structural Interior Design		03JUN9
19	A-17	2nd Floor Furniture Plan – Structural Interior Design		03JUN9
20	A-18	Door and Frame Details		03JUN9
21	A-19	1st Floor Door Schedule and Details		03JUN9
22	A-20	2nd Floor Door Schedule, Window Types and Details		03JUN9
23	A-21	1st and 2nd Floor Signage Schedule		03JUN9
24	A-22	1st and 2nd Floor Signage Schedules and Plan		03JUN9
25	A-23	1st and 2nd Floor Signage Details		03JUN9

Sheet Number	Plate Number	Title	Revision Number	Date
		ABATEMENT PLAN		
26	ASB-1	1st Floor Abatement Demolition Plan		03JUN9
27	ASB-2	2nd Floor Abatement Demolition Plan		03JUN9
28	ASB-3	1st Floor Abatement Ceiling Plan		03JUN9
29	ASB-4	2nd Floor Abatement Ceiling Plan		03JUN9
		STRUCTURAL		
30	S-1	Key Plan and General Notes		03JUN9
31	S-2	Sections and Details		03JUN9
32	S-3	Sections and Details		03JUN9
		FIRE PROTECTION		
30	FP-1	Legend and Details – Fire Protection		03JUN9
31	FP-2	General Notes and Site Plan – Fire Protection		03JUN9
		PLUMBING		
32	P-1	Legend, Schedules, General Notes and Details - Plumbing		03JUN9
33	P-2	1st Floor Demolition Plan - Plumbing		03JUN9
34	P-3	2nd Floor Demolition Plan – Plumbing		03JUN9
35	P-4	1st Floor New Work Plan - Plumbing		03JUN9
36	P-5	2nd Floor New Work Plan - Plumbing		03JUN9
37	P-6	Enlarged Demolition Plans – Plumbing		03JUN9
38	P-7	Enlarged New Work Plans – Plumbing		03JUN9
39	P-8	Isometric Riser Diagram - Plumbing		03JUN9
		MECHANICAL		
40	M-1	Legend and Schedules		03JUN9
38	M-2	Legend and Schedules		03JUN9
39	M-3	Detail – Mechanical		03JUN9
40	M-4	Detail – Mechanical		03JUN9
41	M-5	Detail – Mechanical		03JUN9
42	M-6	1st Floor Plan Demolition Work – Mechanical		03JUN9
43	M-7	2nd Floor Plan Demolition Work – Mechanical		03JUN9
44	M-8	1st Floor Plan New Work - Mechanical		03JUN9
45	M-9	2nd Floor Plan New Work – Mechanical		03JUN9
46	M-10	Attic Plan New Work – Mechanical		03JUN9

Sheet Number	Plate Number	Title	Revision Number	Date
47	M-11	Controls – Mechanical		03JUN9
48	M-12	Controls – Mechanical		03JUN9
49	M-13	Controls - Mechanical		03JUN9
		ELECTRICAL		
50	E-1	Electrical Legend and Schedules		03JUN9
51	E-2	Electrical Schedules		03JUN9
52	E-3	1st Floor Demolition Plan – Electrical		03JUN9
53	E-4	2nd Floor Demolition Plan - Electrical		03JUN9
54	E-5	1st Floor New Work Plan – Lighting		03JUN9
55	E-6	2nd Floor New Work Plan – Lighting		03JUN9
56	E-7	1st Floor New Work Plan – Power		03JUN9
57	E-8	2nd Floor New Work Plan – Power		03JUN9
58	E-9	1st Floor New Work Plan – Special Systems		03JUN9
59	E-10	2nd Floor New Work Plan – Special Systems		03JUN9
60	E-11	Special System Details		03JUN9
		BUILDING 1207		
1	X-1	Cover Sheet		03JUN9
		CIVIL		
2	C-1	Building 1207 Site Plan		03JUN9
		ARCHITECTURAL		
3	A-1	Architectural Legend, Notes and Symbols		03JUN9
4	A-2	Demolition Plan		03JUN9
5	A-3	New Work Plan		03JUN9
6	A-4	Enlarged Plans, Elevations and Details		03JUN9
7	A-5	Reflected Ceiling Plan and Detail		03JUN9
8	A-6	Wall Types		03JUN9
9	A-7	Ground Floor Color Zone Key Plan – Structural Interior Design		03JUN9
10	A-8	Finish Schedule & Finish Specifications – Structural Interior Design		03JUN9
11	A-9	Ground Floor Furniture Plan – Structural Interior Design		03JUN9
12	A-10	Door and Window Schedules, Elevations and Notes		03JUN9

Sheet Number	Plate Number	Title	Revision Number	Date
13	A-11	Door and Window Details		03JUN9
14	A-12	Elevations, Sections and Details		03JUN9
15	A-13	Signage Schedule and Plan		03JUN9
16	A-14	Signage Details		03JUN9
		ABATEMENT PLAN		
17	ASB-1	Abatement Demolition Plan		03JUN9
18	ASB-2	Abatement Ceiling Plan		03JUN9
		STRUCTURAL		
19	S-1	Key Plan and General Notes		03JUN9
20	S-2	Sections and Details		03JUN9
		PLUMBING		
21	P-1	Legend, Schedules, General Notes and Details - Plumbing		03JUN9
22	P-2	Demolition Plan - Plumbing		03JUN9
23	P-3	New Work Plan – Plumbing		03JUN9
24	P-4	Enlarged Plans – Plumbing		03JUN9
25	P-5	Isometric Riser Diagrams - Plumbing		03JUN9
		MECHANICAL		
26	M-1	Legend and Schedules		03JUN9
27	M-2	Legend and Schedules		03JUN9
28	M-3	Detail – Mechanical		03JUN9
29	M-4	Detail – Mechanical		03JUN9
30	M-5	Detail – Mechanical		03JUN9
31	M-6	Demolition Work Floor Plan – Mechanical		03JUN9
32	M-7	Floor Plan New Work - Mechanical		03JUN9
33	M-8	Attic Plan New Work – Mechanical		03JUN9
34	M-9	Controls – Mechanical		03JUN9
35	M-10	Controls – Mechanical		03JUN9
36	M-11	Controls – Mechanical		03JUN9
		ELECTRICAL		
37	E-1	Electrical Legend and Schedules		03JUN9
38	E-2	Electrical Schedules		03JUN9
39	E-3	Demolition Plan – Electrical		03JUN9

Sheet Number	Plate Number	Title	Revision Number	Date
40	E-4	New Work Plan – Lighting		03JUN9
41	E-5	New Work Plan – Power		03JUN9
42	E-6	New Work Plan – Special Systems		03JUN9
43	E-7	Special System Details		03JUN9
44	E-8	New Work/Demolition Site Plan - Electrical		03JUN9

DRAWING REVISIONS BY NOTATION

BUILDING 1170

Plate A-2, Ground Level Demo Plan, Zone B4: Revise note to read, “GC will remove and reinstall existing shelving.”

Plate A-2: Revise Note 1 to read, “Remove existing door, frame and concrete ramp.”

Plate A-2: Add to Demo Note 17, “The existing slab shall be removed as needed to install the new waste and water piping. Demo only those areas for the new piping; abandon the old piping in place. Plug the abandoned piping with concrete.”

Plate A-3: Revise last sentence of Note 6 to read, “Slope new grout bed to drain toward floor drains.”

BUILDING 1205

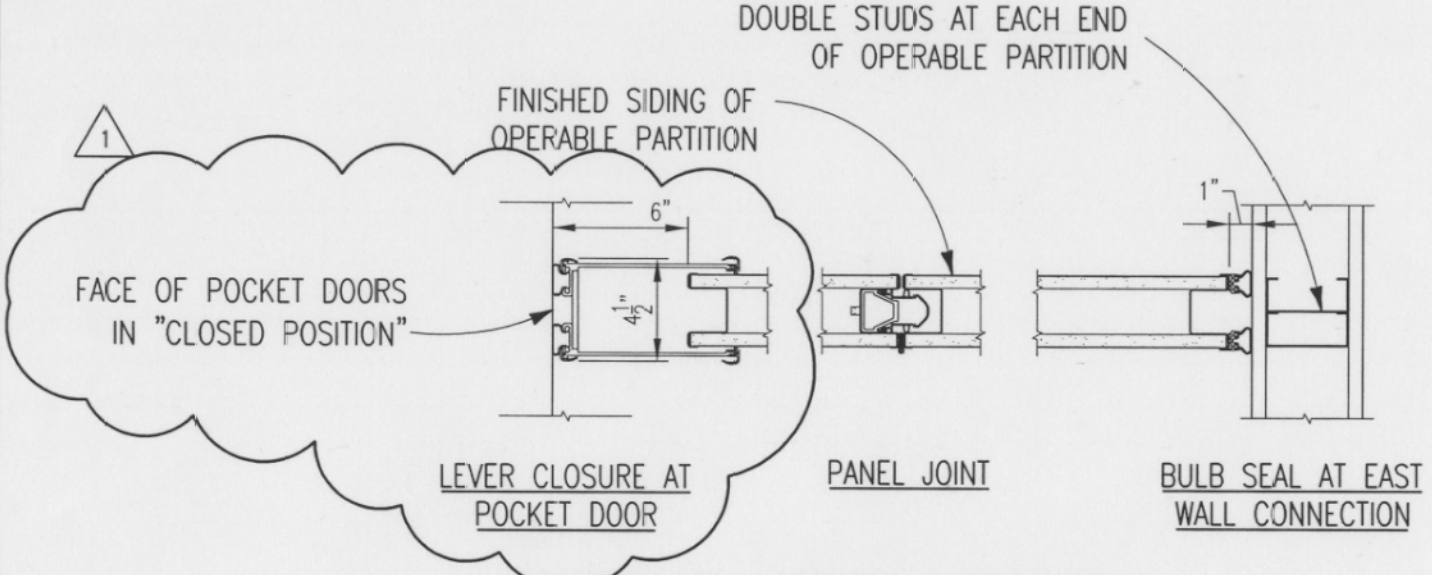
Plate A-19: Revise Detail 1/A4/A19 as shown on Sketch A19/SD-1 attached at the end of this Section.

STANDARD DETAILS BOUND IN THE SPECIFICATIONS

Drawing Number	Sheet Number	Title	Date
SECTION 01501 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS			
	1	Hard Hat Sign	10SEP90
	1&2	U.S. Air Force Project Sign	97NOV14

Attachment follows

~~END OF SECTION~~



HORIZONTAL SECTION THROUGH OPERABLE PARTITION WALL SYSTEM

1
A-4 | A-19

SCALE: 1 1/2" = 1'-0"

R0003

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REVISIONS	DATE	DESCRIPTION
1	8-11-03	REPLACE DETAIL 1-A4/A19

DATE JUNE 9, 2003
DRAWN BY HARDY
CHECKED BY MSH
DESIGNED BY HARDY

QA DEPT OF HUMAN RESOURCES
HVAC RENOVATIONS - PH IV
MH-CS-01-16

HORISONTAL SECTION THRU
OPERABLE PARTITION WALL

SHEET NO.
A19/SD-1

SECTION 01000

SPECIAL CONDITIONS

1. SCOPE

The work covered in these specifications consists of furnishing all plant, labor, equipment and materials for the construction work at McChord AFB, WA. The following items are a brief summary of the project and are provided solely for the purpose of revealing the general nature of the work involved. The Contractor is responsible for accomplishing all items of work in accordance with the applicable drawings, specifications and provisions of the contract. Any sundry labor, materials, equipment and/or appurtenances not specifically detailed or specified, but required to complete the project, shall be provided as an integral part of scope of work hereinafter specified.

1.1 The project consists of all work to demolish architectural, electrical, HVAC and plumbing systems as indicated on the contract drawings for Buildings 1170, 1205 and 1207. Work will be accomplished in vacant buildings with all furnishings removed by the government. Any items left in place are to be removed and disposed of by the contractor at no additional cost to the government.

a. Building 1170: The existing partitions will be removed and approximately 3000 SF of new office space will be provided. The existing electrical, mechanical, and plumbing systems will be replaced with the exception of the below floor waste piping which shall remain. A new fire protection wet pipe sprinkler system will be provided with coverage for the entire structure (11264 SF).

b. Building 1205: Work this building shall require the demolition of most existing non-load bearing partitions. The two existing stairs, the COMM room and the mechanical room are the only spaces that shall remain intact. In addition, the men and women's toilets at each floor shall be reconfigured so as to meet ADA accessibility standards and provide equitable quantities of fixtures within each set of toilets. This reconfiguration will require major modifications to the plumbing, power, lighting, fire alarm, telecommunications data/telephone, access control, fire protection, HVAC and electrical distribution systems. Once the renovation is complete these systems will be new with the exception of the under slab waste lines.

(1) Fire Sprinkler System. The Contractor shall design, furnish and install an approved complete and operable automatic fire sprinkler system in accordance with the required and advisory provisions of MIL-HDBK-1008C and NFPA 13 and as specified in Section 13930. System shall be *wet-pipe type* in conditioned spaces and *dry-pipe type* in unconditioned (i.e. attic) spaces. All piping shall slope for drainage. For the *dry pipe system in the attic space of Building 1205*, provide a compressor, dedicated 20 amp. 110 volt circuit, tamper and flow switch, etc. as required by NFPA 13. Place the control valve in a heated space above the ceiling on the fist floor. See Plates A-5, A-6 and M-10 for details of the attic space.

c. Building 1207: Work this building shall require the demolition of most existing non-load bearing partitions. In addition, the men and women's toilets shall be reconfigured so as to meet ADA accessibility standards and also provide more equitable quantities of fixtures within each set of toilets. The existing break room shall be modified in conjunction with this reconfiguration. This reconfiguration will require major modifications to the plumbing, power, lighting, fire alarm, telecommunications data/telephone, access control, HVAC and electrical distribution systems.

d. Buildings 1170, 1205 and 1207: Fire extinguishers shall be Potter Roemer ABC Multi-purpose Dry Chemical Extinguisher Model No. 3010 (or approved equal), 10 lb. Capacity. Mounting bracket shall be Potter Roemer Model No. 3909, or approved equal.

Once the renovation is complete these systems will be new with the exception of the under slab waste lines.

NOTE: Section 16710 Premises Distribution System, Buildings 1170, 1205 and 1207, Amendment R0003

Cat. 5e cable, hardware and testing are changed to Cat. 6 cable, hardware and testing.

2. APPLICABLE PUBLICATIONS

Federal, commercial and trade association publications, as listed in the separate technical provisions, form a part of this specification to the extent applicable to the work being specified. Such publications are initially listed by basic designation, current issue suffix and subject matter title but will be referred to thereafter in the technical provision by basic designation only.

3. MATERIAL SUBMITTALS

The Contractor shall submit work plans, samples, brochures, manufacturers data, shop drawings and/or certificates of materials to the Contracting Officer for approval prior to their installation. If the material submittals provided are in variance from the contract requirements, the Contractor shall describe such variations in writing at the time of submission and request a variance. Failure to provide such notification will not relieve the Contractor from his responsibility of meeting the contract specifications regardless of whether or not the submittal is approved by the Government. Material submittals shall be as specified under each specification section and be submitted in quadruplicate unless otherwise indicated. All the material submittals from the same specification section shall be submitted at the same time. If the submittal requirement is listed on the drawings, all material submittals of like work shall be submitted simultaneously and with all corresponding specification sections. Failure to submit all material submittals at the same time will be cause for rejection.

3.1 SWPPP (Storm Water Pollution Prevention Plan): No SWPPP is required for this project.

4. SAFETY

All work shall be accomplished in accordance with Corps of Engineers Safety and Health Requirements Manual EM 385-1-1, OSHA 29 CFR 1910, OSHA 29 1926 and applicable AFOSH Standards.

5. PRESENCE OF ASBESTOS

The building or facilities involved in this Contract have been tested for the presence of asbestos-containing material (ACM). It has been determined that this project **will** involve the handling and/or disposal of ACM requiring special procedures. See Specification Section 02220A - DEMOLITION and/or Section 13280 - ASBESTOS ABATEMENT for Contract requirements. In addition to the requirements set forth in Section 13280, the licensed asbestos

removal supervisor shall remain on the construction site, evaluating suspect ACM as uncovered during the on-going demolition phase, until all demolition is completed and the potential of finding previously unidentified ACM is nil.

6. PRESENCE OF LEAD-BASED PAINT

The building or facilities involved in this Contract have been tested for the presence of lead-based paint (LBP). It has been determined that this project **will** involve the handling and/or disposal of LBP requiring special procedures. See Specification Section 02220 - DEMOLITION and/or Section 13281 – Lead Hazard Control Activities for Contract requirements.

7. OZONE DEPLETING SUBSTANCES

The use of ozone-depleting substances will not be utilized during the completion of this project in accordance with Section 326 of the National Defense Authorization Act for Fiscal Year 1993 (Public Law 102-484).

8. POLYCHLORINATED BIPHENYL (PCB) CONTAINING BALLASTS

The building or facilities involved in this Contract contain fluorescent light fixtures and associated ballasts which may or may not contain hazardous materials. The Contractor shall assume that all fluorescent light fixtures and associated ballasts are hazardous (containing PCB's) and prepare the bid/proposal accordingly following the requirements of Section 13281 – Lead Hazard Control Activities. If upon execution of project, it is determined by the contractor (with coordination through the Construction Contract Inspector CCI and Bio-Environmental Engineering) that existing fluorescent ballasts are non-hazardous (officially labeled as "No PCB's"), then disposal shall be as normal ordinary solid waste. Management of spent fluorescent fixture tubes must be managed as 'Universal Waste' in accordance with WAC 173-303-573, or disposed of at an approved landfill certified for the receipt of such waste

9. RADIOACTIVE MATERIALS (RAM)

9.1 Contractors bringing radioactive materials or devices containing radioactive sources onto McChord AFB must have prior approval from the Wing Radiation Safety Officer (RSO). The RSO for McChord AFB is the BioEnvironmental Engineering Flight Commander, who can be reached at (253) 982-3921. Under no circumstances will a contractor use an unlicensed radioactive source/device on McChord AFB. The contractor should direct any questions regarding responsibility on this issue to the Wing RSO prior to starting any work. Since the Air Force considers contracts involving radioactive materials a hazardous items contract, the provisions of AFR 87-8, chapter 3, section 3.3(f) will also apply. In addition, the contractor must submit the following documentation to the Wing RSO for review prior to execution:

- Copy of the Nuclear Regulatory Commission License or Agreement State Radioactive Material License, along with any amendments, covering the radioactive material to be used.

- Copy of the user's qualification and radiation training.

- Copy of the radiation dosimetry results from the previous year.

- Statement of expected use (use rate) of radioactive materials or devices for the length of the contract.

- Statement of storage and security requirements.

- Copies of the last two (2) leak checks (if applicable).

9.2 Radioactive Demolition Recycling/Debris: Radioactive material encountered during demolition procedures will require a written request from the Contractor to the Base Bio-Environmental office for instructions and subsequent actions involving disposal of the RAM debris through Base agencies. Examples include smoke detectors containing a radioactive substance (such as 'Americium-241') and self-luminous exit signs containing 'Tritium'.

9.2.1 The following requirements apply when removing potential radioactive items (i.e. smoke detectors and non-electrical emergency exit signs) during demolition or renovation procedures. The contractor shall develop list of identified RAM items and forward to the Base Radiation Safety Officer via the Contracting Officer. The list shall include the following descriptions associated with the RAM:

- Product Stock Number
- Quantity
- Nomenclature
- Radionuclide

The contractor shall prepare the radioactive/recyclable items for subsequent Government shipping per instructions given by the Base Radiation Safety Officer.

9.2.2 Shipment Procedures: Contractor collects RAM recoverable/recycle items and places items in suitable container with bubble wrap to prevent breakage of items. The items shall be secured/packaged within container meeting the following requirements:

- Easily handled and secured in or on conveyance.
- If provided with lifting attachment, designed with a safety factor.
- External surfaces free from protruding features.
- Outer layer will prevent collection of any liquid (e.g. water).
- Withstands conditions of normal transport including closing devices.
- Materials physically and chemically compatible.
- Protected against unauthorized operation.
- Each feature added does not reduce the safety of package

Contractor shall pre-package items for storage/shipment on-site (protected from the elements) and maintain detailed inventory (Recycle Item Description: Stock Number, Nomenclature, Radionuclide, Activity each, Quantity) and accountability for items placed into each package(s). Package limits shall be less than 0.5 mrem/hr from any contact surface of the package, with no removable contamination above background levels, and the gross weight of any individual package shipped for recycling must not exceed 200 pounds. If shipping by drum, use drums with a capacity of 30-gallons or less, such as NSN 8110-01-454-1841.

9.2.3 Contractor will prepare the package(s) in accordance with the requirements as instructed per this specification and as directed by the Contracting Officer (or authorized representative),

and transport the package(s) to 62 APS/TRTC “Packing & Crating” for subsequent Government shipment to Wright Patterson Air Force Base.

9.2.4 Current Recyclable/Recoverable Materials include the following:

Radionuclide	Form	Examples
Tritium (3H)	Gaseous	Compasses, Wrist Watches, Markers (i.e. Exit Signs, Buttons, Indicators, etc.).
Depleted Uranium	Solid	Counterweights, Non-Explosive Munitions (Penetrators ONLY).
Krypton 85	Gas	Electron Tubes, Nucleonic Oil Indicators, and RADIAC Check Sources.
Americium 241	Solid	Smoke Detectors, M8A1 Chemical Agent Alarm.
Polonium 210	Solid	Static Elimination Devices (typically manufactured by NRD or NPL) NO 3M devices.
Cesium 137	Solid	Exempt distribution check sources (AN/PDR 27T, Button Sources) less than 9.0 microcuries

END OF SECTION

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SECTION 01025

PAYMENT

PART 1 GENERAL

1.1 GENERAL

The contract price for each item shall constitute full compensation for furnishing all plant, labor, materials, appurtenances, and incidentals and performing all operations necessary to construct and complete the items in accordance with these specifications and the applicable drawings, including surveying performed by the Contractor. Payment for each item shall be considered as full compensation, notwithstanding that minor features may not be mentioned herein. Work paid for under one item will not be paid for under any other item. No separate payment will be made for the work, services, or operations required by the Contractor, as specified in DIVISION 1, GENERAL REQUIREMENTS, to complete the project in accordance with these specifications; all costs thereof shall be considered as incidental to the work.

1.2 PAYMENT

1.2.1 ITEM 0001 (BASE ITEM)

Payment will be made at the contract lump sum price for Item No. 0001, All Work to Renovate Building 1170 except for Items 0013 through 0022, payment of which shall constitute full compensation for Item No. 0001, complete.

1.2.2 ITEM 0002 (BASE ITEM)

Payment will be made at the contract lump sum price for Item No. 0002, All Work to Renovate Building 1205 except for Items 0023 through 0029, payment of which shall constitute full compensation for Item No. 0002, complete.

1.2.3 ITEM 0003 (BASE ITEM)

Payment will be made at the contract lump sum price for Item No. 0003, All Work for As-Built Drawings as Specified in Section 01702 from Preparation to Final Approval for Base Items and any Optional Items Exercised, payment of which shall constitute full compensation for Item No. 0003, complete. No partial or total payment will be made for this item until the as-built drawings, both marked up blue prints and electronic files are fully approved by the Government (A or B action) and all copies of approved drawings and electronic media received by the Government. The dollar amount specified in the Bid Schedule may not necessarily reflect the bidder’s actual costs for doing this work

1.2.4 ITEM 0004 (BASE ITEM)

Payment will be made at the contract lump sum price for Item No. 0004, All Work for O&M Manuals, as Specified in Section 01701 from Preparation to Final Approval for Base Items and any Optional Items Exercised, payment of which shall constitute full compensation for Item No. 0004, complete. No partial or total payment will be made for this item until all O&M manuals are fully approved by the Government (A or B action) and all copies of final manuals are

received by the Government in their final binders. The dollar amount specified in the Bid Schedule may not necessarily reflect the bidder's actual costs for doing this work.

1.2.5 ITEM 0005 (BASE ITEM)

Payment will be made at the contract lump sum price for Item No. 0005, All Work for Form 1354 Checklist and Equipment-in-Place List, as Specified in Section 01704 and 01705 from Preparation to Final Approval for Base Items and any Optional Items Exercised, payment of which shall constitute full compensation of Item No. 0005, complete. No partial or total payment will be made for this item until both the 1354 Checklist and Equipment in Place List are fully approved by the Government (A or B action) and all copies of approved lists received by the Government. The dollar amount specified in the Bid Schedule may not necessarily reflect the bidder's actual costs for doing this work.

1.2.6 ITEM 0006 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0006, All Work to Renovate Building 1207 except for Items 0007 through 0012, payment of which shall constitute full compensation for Item No. 0006, complete.

1.2.7 ITEM 0007 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0007, Install Metering for Building 1207, payment of which shall constitute full compensation for Item No. 0007, complete.

1.2.8 ITEM 0008 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0008, Connect the DDC to the EMS for Building 1207, payment of which shall constitute full compensation for Item No. 0008, complete.

1.2.9 ITEM 0009 (OPTIONAL ITEM)

Payment will be made that the contract unit price for Item No. 0009, Install Interior Signage for Building 1207, payment of which shall constitute full compensation for Item No. 0009, complete.

1.2.10 ITEM 0010 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0010, Install Laminated Shelving in Room 119 for Building 1207, payment of which shall constitute full compensation for Item No. 0010, complete.

1.2.11 ITEM 0011 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0011, Install Emergency Power Inverter for Building 1207, payment of which shall constitute full compensation for Item No. 0011, complete.

1.2.12 ITEM 0012 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0012, Install Exterior Primary Power and Transformer for Building 1207, payment of which shall constitute full compensation for Item No. 0012, complete.

1.2.13 ITEM 0013 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0013, Install Metering for Building 1170, payment of which shall constitute full compensation for Item No. 0013, complete.

1.2.14 ITEM 0014 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0014, Connect the DDC to the EMS for Building 1170, payment of which shall constitute full compensation for Item No. 0014, complete.

1.2.15 ITEM 0015 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0015, Install Interior Signage in Building 1170, payment of which shall constitute full compensation for Item No. 0015, complete.

1.2.16 ITEM 0016 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0016, Installation of New Canopies for Building 1170, payment of which shall constitute full compensation for Item No. 0016, complete.

1.2.17 ITEM 0017 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0017, Installation of Metal Wainscot in the Open Hangar Area for Building 1170, payment of which shall constitute full compensation for Item No. 0017, complete.

1.2.18 ITEM 0018 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0018, Installation of New 16’ X 16’ Roll-Up Door for Building 1170, payment of which shall constitute full compensation for Item No. 0018, complete.

1.2.19 ITEM 0019 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0019, Demolition of Existing Sliding Door and Replacement with Metal Siding for Building 1170, payment of which shall constitute full compensation for Item No. 0019, complete.

1.2.20 ITEM 0020 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0020, Replace Five Exit Doors for Building 1170, payment of which shall constitute full compensation for Item No. 0020, complete.

1.2.21 ITEM 0021 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0021, Installation of Emergency Power Inverter for Building 1170, payment of which shall constitute full compensation for Item No. 0021, complete.

1.2.22 ITEM 0022 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0022, Installation of New High Bay Lighting for Building 1170, payment of which shall constitute full compensation for Item No. 0022, complete.

1.2.23 ITEM 0023 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0023, Install Metering for Building 1205, payment of which shall constitute full compensation for Item No. 0023, complete.

1.2.24 ITEM 0024 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0024, Connect the DDC to the EMS for Building 1205, payment of which shall constitute full compensation for Item No. 0024, complete.

1.2.25 ITEM 0025 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0025, Install Interior Signage in Building 1205, payment of which shall constitute full compensation for Item No. 0025, complete.

1.2.26 ITEM 0026 (OPTIONAL ITEM)

Payment will be made for the contract lump sum price for Item No. 0026, Install Raised Floor System in Building 1205, payment of which shall constitute full compensation for Item No. 0026, complete.

1.2.27 ITEM 0027 (OPTIONAL ITEM)

Payment will be made for the contract lump sum price for Item No. 0027, Install Movable Partition in Rooms 121 and 122 in Building 1205, payment of which shall constitute full compensation for Item No. 0027, complete.

1.2.28 ITEM 0028 (OPTIONAL ITEM)

Payment will be made that the contract lump sum price for Item No. 0028, Replace Motor on AHU-1 in Building 1205, payment of which shall constitute full compensation for Item No. 0028, complete.

1.2.29 ITEM 0029 (OPTIONAL ITEM)

Payment will be made at the contract lump sum price for Item No. 0029, Install Emergency Power Inverter in Building 1205, payment of which shall constitute full compensation for Item No. 0029, complete.

1.2.30 ITEM 0030 (OPTIONAL ITEM)

Payment will be made at the contract lump sum price tor Item No. 0030, Design, Furnish and Install Dry Pipe Sprinkler System in Attic Space, payment of which shall constitute full compensation for Item No. 0030, complete.

1.3 PROGRESS PAYMENT INVOICE

Requests for payment shall be submitted in accordance with Federal Acquisition Regulations (FAR) Subpart 32.9, entitled "PROMPT PAYMENT", and Paragraphs 52.232-5 and 52.232-27, entitled "Payments Under Fixed-Price Construction Contracts", and "Prompt Payment for Construction Contracts", respectively. **Contractor shall submit progress payments divided between the MILCON and TWCF work, as identified on the drawings, in the same relative percentage to the total contract as the Government Estimate. The billing value of individual work items may be adjusted by the Government to reflect the relative percentage in the Government Estimate.** In addition each request shall be submitted in the number of copies and to the designated billing office as shown in the Contract.

1.3.1 When submitting payment requests, the Contractor shall complete Blocks 1 through 12 of the "PROGRESS PAYMENT INVOICE" Form as directed by the Contracting Officer. (A sample form is attached at the end of this Technical Specification Section.) The completed form shall then become the cover document to which all other support data shall be attached.

1.3.2 One additional copy of the entire request for payment, to include the "PROGRESS PAYMENT INVOICE" cover document, shall be forwarded to a separate address as designated by the Contracting Officer.

1.3.3 The Contractor shall submit with each pay request, a list of subcontractors that have worked during that pay period. The listing shall be broken down into weeks, identifying each subcontractor that has worked during a particular week, and indicate the total number of employees that have worked on site for each subcontractor for each week. The prime Contractor shall also indicate the total number of employees for its on site staff for each week.

PARTS 2 and 3 NOT USED

PROGRESS PAYMENT INVOICE

See Federal Acquisition Regulations (FAR) 32.900, 52.232-5, & 52.232-27

1. PROJECT AND LOCATION	2. DATE
3. CONTRACTOR NAME AND ADDRESS (Must be the same as in the Contract)	4. CONTRACT NO. _____ 5. INVOICE NO.
6. DESCRIPTION OF WORK	7. PERIOD OF PERFORMANCE From: To:
8. DISCOUNT TERMS	
9. OFFICIAL TO WHOM PAYMENT IS TO BE FORWARDED Name: Title: Phone: ( ) -	10. OFFICIAL TO BE NOTIFIED OF DEFECTIVE INVOICE Name: Title: Phone ( ) -

11. CERTIFICATION: I hereby certify, to the best of my knowledge and belief, that

(1) The amounts requested are only for the performance in accordance with the specifications, terms, and conditions of this contract;

(2) Payments to subcontractors and suppliers have been made from previous payments received under the contract, and timely payments will be made from the proceeds of the payment covered by this certification,

in accordance with subcontract agreements and the requirements of Chapter 39 of Title 31, United States Code;

and

(3) This request for progress payment does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract.

_____ _____ _____

(Signature) **(Title)** **(Date)**

12. OTHER INFORMATION OR DOCUMENTATION required by Contract. Provide two (2) copies of each (check and attach if applicable): _____ Updated Progress Chart/Schedule _____ Progress Narrative _____ Certified Payrolls (submitted weekly) _____ Safety Exposure Report _____ Updated Submittal \register _____ Progress Photos _____ Subcontractor/Employee Listings	(FOR GOVERNMENT USE ONLY) Retainage: _____% Amt.: $_____ Withholdings: $ _____ Reason: _____ _____ ____ Following items are current: As-Builts _____ Yes _____ No O & M Manuals _____ Yes _____ No 1354 Data _____ Yes _____ No Submittal Register _____Yes _____No

END OF SECTION

SECTION 05500

MISCELLANEOUS METAL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 123/A 123M	(2001) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A 653/A 653M	(2000) Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A 924/A 924M	(1999) General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process
ASTM E 814	(2000) Fire Tests of Through-Penetration Fire Stops

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1	(2000) Structural Welding Code - Steel

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10	(1998; Errata 10-98-1) Portable Fire Extinguishers

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTALS:

SD-02 Shop Drawings

Miscellaneous Metal Items

Detail drawings indicating material thickness, type, grade, and class; dimensions; and construction details. Drawings shall include catalog cuts, erection details, manufacturer's descriptive data and installation instructions, and templates. Detail drawings for the following items: Diamond Mesh Partitions.

1.3 GENERAL REQUIREMENTS

The Contractor shall verify all measurements and shall take all field measurements necessary before fabrication. Welding to or on structural steel shall be in accordance with AWS D1.1. Items specified to be galvanized, when practicable and not indicated otherwise, shall be hot-dip galvanized after fabrication. Galvanizing shall be in accordance with ASTM A 123/A 123M, ASTM A 653/A 653M, or ASTM A 924/A 924M, as applicable. Exposed fastenings shall be compatible materials, shall generally match in color and finish, and shall harmonize with the material to which fastenings are applied. Materials and parts necessary to complete each item, even though such work is not definitely shown or specified, shall be included. Poor matching of holes for fasteners shall be cause for rejection. Fastenings shall be concealed where practicable. Thickness of metal and details of assembly and supports shall provide strength and stiffness. Joints exposed to the weather shall be formed to exclude water.

1.4 DISSIMILAR MATERIALS

Where dissimilar metals are in contact, or where aluminum is in contact with concrete, mortar, masonry, wet or pressure-treated wood, or absorptive materials subject to wetting, the surfaces shall be protected with a coat of bituminous paint or asphalt varnish.

1.5 WORKMANSHIP

Miscellaneous metalwork shall be well formed to shape and size, with sharp lines and angles and true curves. Drilling and punching shall produce clean true lines and surfaces. Welding shall be continuous along the entire area of contact except where tack welding is permitted. Exposed connections of work in place shall not be tack welded. Exposed welds shall be ground smooth. Exposed surfaces of work in place shall have a smooth finish, and unless otherwise approved, exposed riveting shall be flush. Where tight fits are required, joints shall be milled. Corner joints shall be coped or mitered, well formed, and in true alignment. Work shall be accurately set to established lines and elevations and securely fastened in place. Installation shall be in accordance with manufacturer's installation instructions and approved drawings, cuts, and details.

1.6 ANCHORAGE

Anchorage shall be provided where necessary for fastening miscellaneous metal items securely in place. Anchorage not otherwise specified or indicated shall include slotted inserts made to engage with the anchors, expansion shields, and power-driven fasteners when approved for concrete; toggle bolts and through bolts for masonry; machine and carriage bolts for steel; and lag bolts and screws for wood.

1.7 SHOP PAINTING

Surfaces of ferrous metal, except galvanized surfaces, shall be cleaned and shop coated with the manufacturer's standard protective coating unless otherwise specified. Surfaces of items to be embedded in concrete shall not be painted. Items to be finish painted shall be prepared according to manufacturer's recommendations or as specified.

PART 2 PRODUCTS

2.1 ACCESS DOORS AND PANELS

Doors and panels shall be flush type unless otherwise indicated. Frames for access doors shall be fabricated of not lighter than 16 gauge steel with welded joints and finished with anchorage for securing into construction. Access doors shall be a minimum of 14 by 20 inches and of not lighter than 14 gauge steel, with stiffened edges, complete with attachments. Access doors shall be hinged to frame and provided with a flush face, screw driver operated latch. Exposed metal surfaces shall have a shop applied prime coat.

2.2 PARTITIONS, DIAMOND MESH TYPE

Partitions shall be constructed of metal fabric attached to structural steel framing members. Fabric shall be expanded metal conforming to ASTM F 1267 of 1-1/2 inch, No. 10 diamond mesh secured to channel frame by welding. Framing members shall be channels 1-1/2 by 1/8 inch minimum size. Channel frames shall be mortised and tenoned at intersections. Steel frames, posts, and intermediate members shall be of the sizes and shapes indicated. Cast-iron floor shoes and caps shall have setscrew adjustment. Doors and grilles shall be provided as indicated, complete with hardware and accessories including locks, guard plates, brackets, and fixed pin butts. Locks shall be bronze, cylinder, mortise type. Keying shall be coordinated with Section 08710 DOOR HARDWARE. Ferrous metal portions of partitions and accessories shall be galvanized.

2.3 MISCELLANEOUS

Miscellaneous plates and shapes for items that do not form a part of the structural steel framework, such as lintels, sill angles, miscellaneous mountings, and frames, shall be provided to complete the work.

2.4 FIRE EXTINGUISHER CABINETS

Cabinets to be located in fire-rated walls shall be fire-rated type, fabricated in accordance with ASTM E 814, and shall be listed by an approved testing agency for 1- and 2-hour combustible and non-combustible wall systems. The testing agency's seal shall be affixed to each fire-rated cabinet. Cabinets shall be of the semi-recessed type suitable for 10 pound extinguishers. Box and trim shall Pe of heavy gage rolled steel. Door shall be a rigid frame with full length piano type hinge and double strength (DSA) glass panel. Door and panel shall be prime-coated inside and out. Cabinet shall be Potter Roemer (or approved equal) ADA accessible cabinet Model No. 7340.

PART 3 EXECUTION

3.1 GENERAL INSTALLATION REQUIREMENTS

All items shall be installed at the locations shown and according to the manufacturer's recommendations. Items listed below require additional procedures as specified.

3.2 REMOVABLE ACCESS PANELS

A removable access panel not less than 12 by 12 inches shall be installed directly below each valve, flow indicator, damper, or air splitter that is located above the ceiling, other than an acoustical ceiling, and that would otherwise not be accessible.

3.3 INSTALLATION OF FIRE EXTINGUISHER CABINETS

Metal fire extinguisher cabinets shall be furnished and installed in accordance with NFPA 10 where shown on the drawings or specified.

-- End of Section --

SECTION 05500

MISCELLANEOUS METAL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ALUMINUM ASSOCIATION (AA)

AA DAF-45	(1997) Designation System for Aluminum Finishes

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 123/A 123M	(2001) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A 653/A 653M	(2000) Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A 924/A 924M	(1999) General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process
ASTM E 814	(2000) Fire Tests of Through-Penetration Fire Stops

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1	(2000) Structural Welding Code - Steel

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10	(1998; Errata 10-98-1) Portable Fire Extinguishers

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

CID A-A-344	(Rev B) Lacquer, Clear Gloss, Exterior, Interior

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTALS:

SD-02 Shop Drawings

Roof Scuttle

Detail drawings indicating material thickness, type, grade, and class; dimensions; and construction details. Drawings shall include catalog cuts, erection details, manufacturer's descriptive data and installation instructions, and templates.

1.3 GENERAL REQUIREMENTS

The Contractor shall verify all measurements and shall take all field measurements necessary before fabrication. Welding to or on structural steel shall be in accordance with AWS D1.1. Items specified to be galvanized, when practicable and not indicated otherwise, shall be hot-dip galvanized after fabrication. Galvanizing shall be in accordance with ASTM A 123/A 123M, ASTM A 653/A 653M, or ASTM A 924/A 924M, as applicable. Exposed fastenings shall be compatible materials, shall generally match in color and finish, and shall harmonize with the material to which fastenings are applied. Materials and parts necessary to complete each item, even though such work is not definitely shown or specified, shall be included. Poor matching of holes for fasteners shall be cause for rejection. Fastenings shall be concealed where practicable. Thickness of metal and details of assembly and supports shall provide strength and stiffness. Joints exposed to the weather shall be formed to exclude water.

1.4 DISSIMILAR MATERIALS

Where dissimilar metals are in contact, or where aluminum is in contact with concrete, mortar, masonry, wet or pressure-treated wood, or absorptive materials subject to wetting, the surfaces shall be protected with a coat of bituminous paint or asphalt varnish.

1.5 WORKMANSHIP

Miscellaneous metalwork shall be well formed to shape and size, with sharp lines and angles and true curves. Drilling and punching shall produce clean true lines and surfaces. Welding shall be continuous along the entire area of contact except where tack welding is permitted. Exposed connections of work in place shall not be tack welded. Exposed welds shall be ground smooth. Exposed surfaces of work in place shall have a smooth finish, and unless otherwise approved, exposed riveting shall be flush. Where tight fits are required, joints shall be milled. Corner joints shall be coped or mitered, well formed, and in true alignment. Work shall be accurately set to established lines and elevations and securely fastened in place. Installation shall be in accordance with manufacturer's installation instructions and approved drawings, cuts, and details.

1.6 ANCHORAGE

Anchorage shall be provided where necessary for fastening miscellaneous metal items securely in place. Anchorage not otherwise specified or indicated shall include slotted inserts made to engage with the anchors, expansion shields, and power-driven fasteners when approved for concrete; toggle bolts and through bolts for masonry; machine and carriage bolts for steel; and lag bolts and screws for wood.

1.7 ALUMINUM FINISHES

Unless otherwise specified, aluminum items shall have standard mill finish. The thickness of the coating shall be not less than that specified for protective and decorative type finishes for items used in interior locations or architectural Class I type finish for items used in exterior locations in AA DAF-45. Items to be anodized shall receive a polished satin finish. Aluminum surfaces to be in contact with plaster or concrete during construction shall be protected with a field coat conforming to CID A-A-344.

1.8 SHOP PAINTING

Surfaces of ferrous metal except galvanized surfaces, shall be cleaned and shop coated with the manufacturer's standard protective coating unless otherwise specified. Surfaces of items to be embedded in concrete shall not be painted. Items to be finish painted shall be prepared according to manufacturer's recommendations or as specified.

PART 2 PRODUCTS

2.1 ACCESS DOORS AND PANELS

Doors and panels shall be flush type unless otherwise indicated. Frames for access doors shall be fabricated of not lighter than 16 gauge steel with welded joints and finished with anchorage for securing into construction. Access doors shall be a minimum of 14 by 20 inches and of not lighter than 14 gauge steel, with stiffened edges, complete with attachments. Access doors shall be hinged to frame and provided with a flush face, screw driver operated latch. Exposed metal surfaces shall have a shop applied prime coat.

2.2 MISCELLANEOUS

Miscellaneous plates and shapes for items that do not form a part of the structural steel framework, such as lintels, sill angles, miscellaneous mountings, and frames, shall be provided to complete the work.

2.3 ROOF SCUTTLES

Roof scuttles shall be aluminum with 3 inch beaded flange welded and ground at corners. Scuttle shall be sized to provide minimum clear opening as indicated on drawings. Cover and curb shall be insulated with 1 inch thick rigid insulation covered and protected by aluminum sheet. The curb shall be equipped with an integral metal cap flashing of the same gauge and metal as the curb, full welded and ground at corners for weathertightness. Scuttle shall be completely assembled with heavy hinges, compression spring operators enclosed in telescopic tubes, positive snap latch with turn handles on inside and outside and neoprene draft shall be equipped with an automatic hold-open arm complete with handle to permit one hand release.

2.4 FIRE EXTINGUISHER CABINETS

Cabinets to be located in fire-rated walls shall be fire-rated type, fabricated in accordance with ASTM E 814, and shall be listed by an approved testing agency for 1- and 2-hour combustible and non-combustible wall systems. The testing agency's seal shall be affixed to each fire-rated cabinet. Cabinets shall be of the semi-recessed type suitable for 10 pound

extinguishers. Box and trim shall be of heavy gage rolled steel. Door shall be a rigid frame with full length piano type hinge and double strength (DSA) glass panel. Door and panel shall be prime-coated inside and out. Cabinet shall be Potter Roemer (or approved equal) ADA accessible cabinet Model No. 7340.

PART 3 EXECUTION

3.1 GENERAL INSTALLATION REQUIREMENTS

All items shall be installed at the locations shown and according to the manufacturer's recommendations. Items listed below require additional procedures as specified.

3.2 REMOVABLE ACCESS PANELS

A removable access panel not less than 12 by 12 inches shall be installed directly below each valve, flow indicator, damper, or air splitter that is located above the ceiling, other than an acoustical ceiling, and that would otherwise not be accessible.

3.3 INSTALLATION OF FIRE EXTINGUISHER CABINETS

Metal fire extinguisher cabinets shall be furnished and installed in accordance with NFPA 10 where shown on the drawings or specified.

-- End of Section --

SECTION 13930

FIRE SPRINKLER SYSTEM

PART 1 GENERAL

1.1 SCOPE OF WORK

Perform work and provide material and equipment as shown on Drawings and/or as specified and/or indicated in this Section of the Specifications. Completely coordinate work of this Section with work of other trades and provide a complete and fully functional installation.

Drawings and Specifications form complimentary requirements; provide work specified and not shown, and work shown and not specified as though explicitly required by both. Although work is not specifically shown or specified, provide supplementary or miscellaneous items, appurtenances, devices and materials obviously necessary for a sound, secure and complete installation.

Give notices, file plans, obtain permits and licenses, pay fees and backcharges, and obtain necessary approvals from authorities that have jurisdiction as required to perform work in accordance with all legal requirements and with Specifications, Drawings, Addenda and Change Orders, all of which are part of Contract Documents.

1.2 GENERAL REQUIREMENTS

The Contractor shall design, furnish and install an approved complete and operable automatic fire sprinkler system in accordance with the required and advisory provisions of MIL-HDBK-1008C and NFPA 13 and as specified herein. System shall be wet-pipe type in conditioned spaces and dry-pipe type in unconditioned (i.e. attic) spaces. All piping shall slope for drainage.

The Contractor shall provide a guard for each sprinkler in the janitor’s closets, mechanical rooms and sprinklers within 7 feet of the floor and other areas as required by NFPA 13.

Sprinklers shall be uniformly spaced on branch lines. Maximum spacing per sprinkler shall not exceed limits specified in NFPA 13.

Pendant sprinkler heads shall be installed on return bands and all pendant heads shall be centered in ceiling tiles.

The Contractor shall install electrical heating cable and controls as required protecting a wet pipe system from freezing in unheated areas. Heat tape may be used only to the extent allowable in NFPA 13. Otherwise, a Dry Pipe System shall be used.

The Contractor shall remove as much of the pavement as may be necessary for the installation of fire protection water service main; excavate the trenches and pits to the required dimensions; excavate the bell holes, construct and maintain all bridges required for traffic control; sheet, brace and support the adjoining ground structures where necessary; handle all drainage or groundwater; guard the site, unload, haul, distribute, lay and test the pipe, fittings, valves, and accessories; rearrange other, replace all damaged drains, sewers, or other structures; backfill the trench and pits; restore sidewalks and roadway surface unless otherwise stipulated; remove surplus excavated material; clean the site of the work; chlorinate the completed pipeline, and have samples checked and approved for bacteriological analysis and maintain the street or other surface over the trenches. All piping shall be installed in accordance with NFPA 24.

The Contractor shall repair damage to drainage structures, erosion control, and related work of similar nature caused as a result of new work. It is the Contractor's responsibility to maintain the finish grades against erosion. Damage caused by erosion shall be corrected by the Contractor at no additional expense to the Government until a satisfactory stand of permanent grass/ground cover is established.

1.3 CODES AND STANDARDS

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 13	Installation of Sprinkler Systems
NFPA 24	Standard for Installation of Fire Service Mains and Their Appurtenances
NFPA 25	Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems
NFPA 72	National Fire Alarm Code
NFPA 1963	Fire Hose Connections

FEDERAL/MILITARY SPECIFICATIONS, STANDARDS, BULLETINS, HANDBOOKS, DESIGN MANUALS.

MIL-HDBK-1008C	Military Handbook - Fire Protection for Facilities Engineering, Design, and Construction.

AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE)

ASSE 1013	Reduced Pressure Principle Backflow Preventers
ASSE 1015	Double Check Valve Backflow Preventers
ASSE 1060	Performance Requirements for Outdoor Enclosures for Backflow Prevention Assemblies

AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C 651	Disinfecting Water Mains

FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH (FCCHR)

FCCHR-01	Manual of Cross-Connection Control

1.4 SUBMITTALS

1.4.1 Submittal data shall be submitted on the following items and shall comply with the requirements of Division 01 dealing with Submittals.

a. Sprinkler heads.

b. Pipe, fittings and valves.

c. Pipe hangers and supports.

d. Fire Protection Contractors Certificate of Competency, Qualifications and Registration or Certification.

e. Backflow preventer, post indicator and valve and fire department

connectors.

f. Flow and tamper switches.

g. Alarm valve riser components.

h. Existing water supply:

(1) Elevation of static and elevation of residual test gauge: 2 feet above site grade.

(2) Location of test: Vicinity of Building 1205

(3) Pressure Hydrant: Static 65 psi, residual 55 psi

(4) Flow Hydrant: 1600 gpm

(5) Date: January 14, 2003

The water capacity data provided herein is for information only. The Contractor shall provide new water flow tests utilizing a 24-hour chart recorder on hydrants connected to the fire loop at water system supply locations applicable to this project. The Contractor shall utilize the new on-site water capacity data collected for hydraulic calculations and system design. Water supply flow tests shall be performed by the contractor at no additional cost to the Government. Coordinate flow test with the Contracting Officer prior to starting work.

i. Hydraulic calculations:

(1) Piping shall be hydraulically calculated to provide the proper density over the most hydraulically remote area as required in NFPA 13.

(2) Hydraulic calculations shall be as outlined in NFPA 13 except that calculations shall be performed by computer using software intended specifically for fire protection system design using the design data shown on the drawings. Software that uses k-factors for typical branch lines is not acceptable. Calculations shall substantiate that the design area used in the calculations is the most demanding hydraulically. Water supply curves and system requirements shall be plotted on semi-logarithmic graph paper so as to present a summary of the complete hydraulic calculation. A summary sheet listing sprinklers in the design area and their respective hydraulic reference points, elevations, actual discharge pressures and actual flows shall be provided. Elevations of hydraulic reference points (nodes) shall be indicated. Documentation shall identify each pipe individually and the nodes connected thereto. The diameter, length, flow, velocity, friction loss, number and type fittings, total friction loss in the pipe, equivalent pipe length and Hazen-Williams coefficient shall be indicated for each pipe. For gridded systems, calculations shall show peaking of demand area friction loss to verify that the hydraulically most demanding area is being used. Also for gridded systems, a flow diagram indicating the quantity and direction of flows shall be included. A drawing showing hydraulic reference points (nodes) and pipe designations used in the calculations shall be included and shall be independent of shop drawings.

(3) Hydraulic calculations shall be based upon the Hazen-Williams formula with a "C" value of 120 for steel piping, 150 for copper tubing, 140 for new cement-lined ductile-iron piping, and 100 for

existing underground piping.

(4) Limit velocity in all piping to 20 fps or less.

j. Operation and maintenance data.

k. Working drawings: Submit drawings for fabrication and erection in accordance with NFPA 13 requirements. Indicate required anchorage and accessory items, field dimensions and finishes. Indicate construction details, methods of assembly and fastening, relationship and arrangement of piping, sprinklers, valves, and alarms. Submit six (6) copies for approval. Do not start fabrication or construction until after review of approved drawings by Contracting Officer. Sprinkler locations shall be coordinated with reflected ceiling plan. Pipe routing shall be coordinated with existing structure, equipment, utilities, etc. The Contractor is responsible for field survey of all areas of work to determine pipe routings and to determine the most practical and feasible means of avoiding obstructions. Where existing ceiling are involved, spaces above maybe crowded. Contractor is responsible for removal and replacement of existing ceilings where required to install piping and heads as needed to comply with NFPA 13. Contractor shall be aware that removal and replacement of lay-in and/or hard ceilings will be included in the contract bid. The Contractor shall determine the extent of ceiling work required prior to bid and shall include this work in the contract.

l. Heating cable, controls, pipe insulation and accessories.

1.5 COMMISSIONING AND START UP

Prior to final payment and as part of the final inspection, the CONTRACTOR shall demonstrate that the installed equipment performs its required functions and meets the requirements of these specifications. The CONTRACTOR shall repair or replace equipment found to be malfunctioning.

Commissioning is the responsibility of the Contractor. The Contractor is responsible to provide all scheduling, coordination and support required for start-up, testing, and commissioning. The commissioning process requires that all portions of the work have been completed in a satisfactory and fully operational manner.

1.6 AS-BUILT RECORDS AND DRAWINGS

1.6.1 Preparation of As-Built Drawings

No earlier than 30 days after award the Contracting Officer will have available for the Contractor one set of AutoCAD (.DWG) electronic file format contract drawings or Bentley Microstation (.DNG), to be used for preparation of as-built drawings. The Contracting Officer shall determine which format is applicable.

The electronic file drawings will be available on either 3-1/2 inch 1.44 MB floppy disks or ISO-9660 CD-ROM, as directed by the Contracting Officer. The Contractor has 30 days after the receipt of the electronic file to verify the usability of the AutoCAD files, and bring any discrepancies to the attention of the Contracting Officer. Any discrepancies will be corrected within 15 days and files returned to the Contractor. The Contractor shall also incorporate all the written modifications to the contract drawings, which were issued by amendment or contract modification. All revisions and changes shall be incorporated, i.e. items marked “deleted” shall be deleted, clouds around new items shall be removed, etc.

1.6.2 As-Built Drawings Submittal

No later than 30 days after final acceptance a complete set of as-built drawings shall be submitted in AutoCAD (.DWG) or Bentley Microstation (.DNG), electronic file format. The Contracting Officer shall determine which format is applicable.

The electronic file format, layering standards and submittal requirements are specified in paragraphs below. The as-built drawings shall be done in a quality equal to that of the originals. Line work, line weights, lettering, and use of symbols shall be the same as the original line work, line weights, and lettering, and symbols. If additional drawings are required they shall be prepared in electronic file format under the same guidance. When final revisions have been completed, each drawings shall be identified with the words “AS-BUILT” in block letters at least 3/8 inch high placed above the title block if space permits, or if not, below the title block between the border and the trim line. The date of completion and the words “AS-BUILT RECORD DRAWINGS” shall be placed in the revision block above the latest revision notation.

1.6.3 Electronic File Submittal Requirements

The electronic file(s) deliverable shall be in AutoCAD (.DWG) or Bentley Microstation (.DNG) binary format. The Contracting Officer shall determine which format is applicable.

All support files required to display or plot the file(s) in the same manner as they were developed shall be delivered along with the files. These files include but are not limited to Font files, Menu files, Plotter Setup, and Referenced files.

Layering shall conform to the guidelines defined by the American Institute of Contracting Officers (AIA) standard document, “CAD Layer Guidelines”, latest version. An explanatory list of which layer is used at which drawing and an explanatory list of all layers which do not conform to the standard AIA CAD Layer Guidelines including any user definable fields permitted by the guidelines shall be provided with each submittal.

1.6.4 Electronic File Deliverable Media

All electronic files shall be submitted on ISO 9660 format CD-ROM. Three complete sets of disks shall be submitted along with one complete set of full size reproducible prints taken from the disks. Each disk shall have a clearly marked label stating the Contractor’s firm name, project name and location, submittal type (AS-BUILT), and date. Each submittal shall be accompanied by a hard copy transmittal sheet that contains the above information along with a tabulated information sheet about each file, as shown below:

Electronic File Name	Plate Number	Drawing Title

Electronic version of the table shall be included with each submittal set of disks.

1.6.5 Submittal of the Final As-Built Drawings

The final as-built record drawings shall be completed and returned together with the approved preliminary as-built drawings to the Contracting Officer within 30 calendar days of final acceptance. All drawings from the original contract drawings set shall be included, including the drawings where no changes were made. The Contracting Officer will review all final as-built record drawings for accuracy and conformance to the drafting standards and other specified requirements. The drawings will be returned to the Contractor if corrections are necessary. The Contractor shall make all corrections and

shall return the drawings to the same office within 7 calendar days of receipt.

1.6.6 Costs

All costs incurred by the Contractor in the preparation and furnishing of as-built drawings in electronic file format shall be included in the contract price and no separate payment will be made for this work. Approval and acceptance of the final as-built record drawings shall be accomplished before final payment is made to the Contractor.

1.7 FIRE PROTECTION SPECIALIST

Work specified in this section shall be performed under the supervision of and certified by the Fire Protection Specialist. The Fire Protection Specialist shall be an individual who is a registered professional engineer and a Full Member of the Society of Fire Protection Engineers or who is certified as a Level III Technician by National Institute for Certification in Engineering Technologies (NICET) in the Automatic Sprinkler System Layout sub-field of Fire Protection Engineering Technology in accordance with NICET 1014-7. The Fire Protection Specialist shall be regularly engaged in the design and installation of the type and complexity of system specified in the Contract documents, and shall have served in a similar capacity for at least three systems that have performed in the manner intended for a period of not less than 6 months.

1.8 SPRINKLER SYSTEM INSTALLER QUALIFICATIONS

Fire Sprinkler Contractor’s Proficiency: The firm's proficiency in the installation, start-up, adjustment and maintenance of sprinkler systems shall have been demonstrated by the successful performance of work as specified herein on at least similar systems. The firm shall be a licensed contractor with a certificate of competency. The firm shall have trained personnel, instruments, tools, and equipment to perform the installation and maintenance service specified. The firm shall have been in business performing services as specified herein for at least three years.

1.9 REGULATORY REQUIREMENTS

Compliance with referenced NFPA standards is mandatory. This includes advisory provisions listed in the appendices of such standards, as though the word "shall" had been substituted for the word "should" wherever it appears. In the event of a conflict between specific provisions of this specification and applicable NFPA standards, this specification shall govern. Reference to "authority having jurisdiction" shall be interpreted to mean the Contracting Officer.

1.10 CERTIFICATES

Fire Protection Specialist Inspection: Concurrent with the Final Acceptance Test Report, certification by the Fire Protection Specialist that the sprinkler system is installed in accordance with the contract requirements, including signed approval of the Preliminary and Final Acceptance Test Reports.

1.11 WARRANTIES

The work shall be guaranteed against defective material, equipment, equipment design, and workmanship for a period of one year from the date of final acceptance. Upon written notice from the architect of a defect, all repairs shall be made promptly by and at the expense of the contractor. Written manufacturers’ and service warranties on major equipment and components shall be furnished as part of request for project substantial completion. Warranties exceeding one year shall include any required bi-annual or annual maintenance

that is required to be performed by the manufacturer or manufacturer's representative.

1.12 OPERATION AND MAINTENANCE DATA

Sprinkler System: Six manuals listing step-by-step procedures required for system startup, operation, shutdown, and routine maintenance, at least 14 days prior to field training. The manuals shall include the manufacturer's name, model number, parts list, list of parts and tools that should be kept in stock by the Government for routine maintenance including the name of a local supplier, simplified wiring and controls diagrams, troubleshooting guide, and recommended service organization (including address and telephone number) for each item of equipment.

1.13 FIRESTOPPING

Firestopping shall consist of furnishing and installing tested and listed firestop systems, combination of materials, or devices to form an effective barrier against the spread of flame, smoke and gases, and maintain the integrity of fire resistance rated walls, partitions, floors, and ceiling-floor assemblies, including through-penetrations and construction joints and gaps. Through-penetrations include the annular space around pipes, tubes, conduit, wires, cables and vents. Construction joints include those used to accommodate expansion, contraction, wind, or seismic movement; firestopping material shall not interfere with the required movement of the joint. Gaps requiring firestopping include gaps between the curtain wall and the floor slab and between the top of the fire-rated walls and the roof or floor deck above. The Contractor shall engage an experienced Installer who is certified, licensed, or otherwise qualified by the firestopping manufacturer as having the necessary staff, training, and a minimum of 3 years experience in the installation of manufacturer's products per specified requirements.

PART 2 PRODUCTS

2.1 SPRINKLER HEADS

Locate sprinkler heads in a consistent pattern with ceiling grid, lights, and air supply diffusers. Heads in relation to ceiling and the spacing of sprinkler heads shall not exceed that permitted by NFPA 13. Sprinklers in high heat areas in close proximity to unit heaters shall have temperature classification in accordance with NFPA 13. Sprinklers with internal O-rings shall not be used. Sprinklers shall be used in accordance with their listed spacing limitations. Sprinklers in high heat areas including mechanical spaces shall have temperature classification in accordance with NFPA 13. Orifice of extended coverage sprinklers shall not exceed 17/32 inch. Sprinkler heads shall be rated for use with water working pressures up to 175 psi and 250 psi for high-pressure systems.

2.1.1 Concealed Sprinkler shall be quick-response type, and shall have a nominal 1/2 inch or 17/32 inch orifice. Cover plate color shall be selected by the Contracting Officer.

2.1.2 Pendent Sprinkler shall be recessed type, quick-response with nominal 1/2 inch or 17/32 inch orifice. Pendent sprinklers shall have a polished chrome finish.

2.1.3 Upright Sprinkler shall be quick-response type and shall have a nominal 1/2 inch or 17/32 inch orifice. Upright sprinklers shall have a bronze finish.

2.1.4 Sidewall Sprinkler shall be quick-response, extended coverage type and shall have a nominal 1/2-inch orifice. Sidewall sprinkler shall have a polished

chrome finish.

2.1.5 Dry Sidewall and/or Pendent Sprinkler (in areas subject to freezing temperatures) shall be quick-response, closed, automatic type with bronze body spray deflector and shall have a nominal 1/2 inch orifice. The escutcheon shall have a brass finish.

2.1.6 Sprinklers in Mental Health and Behavior Units shall be “institutional” type. Maximum breakaway strength shall be certified by the manufacturer to be no more than 39 kPa (85 pounds).

2.1.7 Provide quick response sprinklers in all areas, except where specifically prohibited by their listing or approval, and the following:

a. Cold storage rooms shall be standard response, dry pendant sprinklers.

b. Elevator shafts and elevator machine rooms shall be standard response sprinklers.

c. Elevator pit shall be standard response, sidewall sprinklers.

d. Generator rooms shall be standard response sprinklers.

2.1.8 Temperature Ratings: In accordance with NFPA 13, except as follows:

a. Sprinklers in elevator shafts, elevator pits, and elevator machine rooms shall be intermediate temperature rated.

b. Sprinklers in generator rooms shall be high temperature rated.

2.2 INSPECTOR’S TEST AND DRAIN VALVE

Inspector’s Test and Drain Valve: UL Listed and FM approved. Combination valve (Off, Test or Drain Positioning), sight glass, and 1/2 inch nominal orifice.

2.3 UNDERGROUND PIPING COMPONENTS

2.3.1 Pipe

Underground piping shall be ductile iron with a rated working pressure of 150 psi, with cement mortar lining.

2.3.2 Fittings and Gaskets

Fittings shall be ductile iron. Gaskets shall be suitable in design and size for the pipe with which such gaskets are to be used.

2.3.3 Gate Valve and Indicator Posts

Gate valves for underground installation shall be of the inside screw type with counter-clockwise rotation to open. Where indicating type valves are shown or required, indicating valves shall be gate valves with an approved indicator post of a length to permit the top of the post to be located 3 feet above finished grade. Gate valves and indicator posts shall be listed by Underwriter’s Laboratory or Factory Mutual.

2.4 ABOVEGROUND PIPING COMPONENTS

2.4.1 Steel Piping Components

Aboveground piping shall be steel. Steel piping shall be Schedule 40 or

Schedule 10 for sizes less than 8 inches in diameter and Schedule 40 for sizes 8 inches and larger in diameter. Pipe in which threads or grooves are cut shall be Schedule 40 or shall be listed by Underwriters Laboratories to have a corrosion resistance ratio (CRR) of 1.0 or greater after threads or grooves are cut. Pipe shall be marked with the name of the manufacturer, kind of pipe, and ASTM designation.

2.4.2 Sprinkler piping for dry pipe systems shall be steel galvanized. The inside wall and the exterior of the pipe shall be galvanized.

2.4.2.1 Fittings for Non-Grooved Steel Pipe

Fittings shall be cast iron, steel or malleable iron. Steel press fittings shall be approved for fire protection systems. Galvanized fittings shall be used for piping systems or portions of piping systems utilizing galvanized piping. Fittings into which sprinklers, drop nipples, or riser nipples (sprigs) are screwed shall be threaded type. Plain-end fittings with mechanical couplings, fittings that use steel gripping devices to bite into the pipe and segmented welded fittings shall not be used.

2.4.2.2 Fittings for Grooved Mechanical Joints and Fittings

Joints and fittings shall be designed for not less than 175-psi service and shall be the product of the same manufacturer. Fitting and coupling houses shall be malleable iron, Grade 32510 or ductile iron, Grade 65-45-12. Gasket shall be the flush type that fills the entire cavity between the fitting and the pipe. Nuts and bolts shall be heat-treated steel and shall be cadmium plated or zinc electroplated.

2.4.2.3 Flanges

Flanges shall conform to NFPA 13. Gaskets shall be non-asbestos compressed material, 1/16 inch thick, and full face or self-centering flat ring type. Bolts and nuts shall be hexagon type.

2.4.3 Sprinkler piping for wet pipe systems shall be designed for not less than 300-psi service, black as permitted by NFPA 13.

2.4.3.1 Fittings for Non-Grooved Steel Pipe

Fittings shall be cast iron or malleable iron, designed for not less than 300-psi service. Fittings into which sprinklers, drop nipples or riser nipples (sprigs) are screwed shall be threaded type. Plain-end fittings with mechanical couplings, fittings that use steel gripping devices to bite into the pipe and segmented welded fittings shall not be used.

2.4.3.2 Fittings for Grooved Mechanical Joints and Fittings

Joints and fittings shall be designed for not less than 300-psi service and shall be the product of the same manufacturer. Fitting and coupling houses shall be malleable iron or ductile iron. Gaskets shall be the flush type that fills the entire cavity between the fitting and the pipe. Nuts and bolts shall be heat-treated steel and shall be cadmium plated or zinc electroplated. Gaskets shall be suitable in design and size for the pipe with which such gaskets are to be used.

2.4.3.3 Flanges

Flanges shall be Class 300 and conform to NFPA 13. Gaskets shall be non-asbestos compressed material, 1/16 inch thick, and full face or self-centering flat ring type. Bolts and nuts shall be hexagon type. Gaskets shall be suitable in design and size for the pipe with which such gaskets are to be

used.

2.4.4 Control Valve and Gate Valve

Manually operated sprinkler control valve and gate valve shall be outside stem and yoke (OS&Y) type and shall listed by Underwriter's Laboratory or Factory Mutual.

2.4.5 Check Valve

Check valve 2 inches and larger shall be listed by Underwriter's Laboratory or Factory Mutual. Check valves 4 inches and larger shall be of the swing type with flanged cast iron body and flanged inspection plate, shall have a clear waterway and shall meet the requirements for Type 3 or 4.

2.4.6 Pipe Hangers

Hangers shall be listed by Underwriter's Laboratory or Factory Mutual and be of the type suitable for the application, construction, and pipe type and sized involved.

2.5 FIRE DEPARTMENT CONNECTION

Located in backflow preventer vault. Fire department connection shall be projecting type, UL Listed with cast brass body, matching wall escutcheon lettered "Auto Spkr" with a chromium plated finish. The connection shall have two inlets with individual self-closing clappers, caps with drip drains and chains. Female inlets shall have 2-1/2 inch diameter with thread size to suit local fire department hardware.

2.6 BACKFLOW PREVENTERS

Assemblies, double check valve assemblies, atmospheric (non-pressure) type vacuum breakers, and pressure type vacuum breakers

Reduced Pressure Detector (RPDA) or Double Check Detector Assembly (DCDA) backflow preventer shall be installed on fire protection systems when connected to a potable water supply. The backflow preventer shall be a complete assembly including UL listed resilient seated OS&Y shutoff valves and four test cocks. The assembly shall include an auxiliary bypass line consisting of an approved backflow preventer and bronze water meter.

Device shall be specifically approved by the University of Southern California Foundation for Cross Connection Control and shall comply with the local water utility requirements as well as NFPA 24.

2.7 WALL HYDRANT FOR TESTING BACKFLOW PREVENTER

Wall hydrant shall be flush type with cast brass body, matching wall escutcheon lettered "Hydrant" with a polished brass finish. The hydrant shall have two male outlets and cap chains. Male outlets shall have 2-1/2 inch diameter American National fire hose connection screw threads (NH) per NFPA 1963.

Examples: Potter-Roener Model 5825

Crocker Model 6627

2.8 BACKFLOW PREVENTER FREEZE ENCLOSURE

2.8.1 Above Ground Enclosures

Above ground enclosures shall be a manufactured aluminum housing with 16-gauge with a flip-top lid, with lid handle and stays. The lid will have a staple and hasp to accommodate a padlock. The lid shall have a continuous, piano hinge across the enclosure. The ceiling and inner walls shall have a minimum 1-1/2 inch, “R” factor =8, polyisocyanurate insulation foam throughout the enclosure. The enclosure shall have two drain ports located one at each end. The enclosure shall have one factory sized and installed 1000W, 120V, single-phase heater mounted on the interior rear wall. The heater shall have an electrical cord with plug for easy receptacle connection and a fan to circulate warm air. The heater shall have a thermostat to maintain 40 degrees F inside temperature. No wood or particleboard shall be allowed on the exterior of the assembly. Enclosure shall be mounted on a concrete pad in accordance with manufacturer's instructions. Enclosure shall be manufactured specifically for backflow preventer use by a manufacturer who specializes in constructing backflow preventer enclosures. Each enclosure shall be selected for the backflow preventer with access panels that allow easy access for maintenance with removal of enclosure. Outdoor enclosures must meet or exceed compliance with ASSE 1060.

Contractor shall install G.F.I. protected service and receptacle for enclosure heater operation. Routing of conduit and location of receptacle shall be determined by the Contractor and approved by the Contracting Officer. Bury conduit minimum 24 inches below finished grade beneath parking areas and drives. Bury conduit minimum 12 inches elsewhere. Install 6 inch wide detectable Extra Strength Terratape within 6 inches of finished grade above all conduits and/or duct banks installed below grade. Conduit shall be galvanized rigid conduit or electrical metallic tubing. Conduits 1-1/2 inches and larger; exposed below 5'-0"; branch conduit to motors 2 hp and larger; or exposed to weather shall be rigid. Only rigid galvanized conduit shall be installed underground and in or under concrete slab on grade.

Elsewhere conduit shall be EMT. Connectors and couplings for rigid shall be threaded EMT shall be split-ring compression type. Indenter or setscrew types are not acceptable. Conduits in contact with ground shall be coated with two coats of asphaltic paint or use conduit with 20 mil-bonded coat of PVC. All joints shall be re-coated after installation.

2.8.2 Below Ground Enclosures

Below ground enclosures shall be pre-cast or field formed and poured concrete boxes. Concrete utilized shall have a minimum compressive strength of 4000 psi at 28 days. Steel reinforcing shall conform to ASTM A-615 (GR60) for reinforcing bars.

A two leaf, aluminum frame and cover, diamond plate finish, reinforced to a 300 P.S.F. live load, access door shall be cast in the enclosure top. The access door shall have flush type handle(s) stainless steel hinges and automatic hold open arm. A staple for a padlock shall be provided for security.

2.9 ALARM INITIATING AND SUPERVISORY DEVICES

2.9.1 Sprinkler Water Flow Indicator Switch, Vane Type

Switch shall be vane type with a pipe saddle and cast aluminum housing. The electro-mechanical device shall include a flexible, low-density polyethylene paddle conforming to the inside diameter of the fire protection pipe. The device shall sense water movements and be capable of detecting a sustained flow

of 10 gpm or greater. The device shall contain a retard device adjustable from 0 to 90 seconds to reduce the possibility of false alarms caused by transient flow surges. The switch shall be tamper resistant and contain two SPDT (Form C) contacts arranged to transfer upon removal of the housing cover, and shall be equipped with a silicone rubber gasket to assure positive water seal and a dustproof cover and gasket to seal the mechanism from dirt and moisture.

2.9.2 Sprinkler Pressure (Waterflow) Alarm Switch

Pressure switch shall include a metal housing with a neoprene diaphragm, SPDT snap action switches and a 1/2 inch NPT male pipe thread. The switch shall have a maximum service pressure rating of 175 psi. There shall be two SPDT (Form C) contacts factory adjusted to operate at 4 to 8 psi. The switch shall be capable of being mounted in any position in the alarm line trim piping of the alarm check valve.

2.9.3 Valve Supervisory (Tamper) Switch

Switch shall be suitable for mounting to the type of control valve to be supervised open. The switch shall be tamper resistant and contain one set of SPDT (Form C) contacts arranged to transfer upon removal of the housing cover or closure of the valve of more than two rotations of the valve stem.

2.10 PRESSURE GAUGES

Gauges shall be 4-1/2 inch dial, 1/2 percent accurate per ASME B40.1 Grade 2A, 1/4 inch NPT bottom connection, stainless steel case, and range so that indicated pressure is at midpoint on gauge.

2.11 ELECTRICAL HEATING CABLES AND CONTROLS

2.11.1 Heating Cable

Self-regulating electric heating cable composed of minimum 16 AWG copper buss wires encased in semi conductive polymer in which resistance varies with temperature. Matrix shall be jacketed in inner thermoplastic rubber insulation, copper braid, and outer polymer jacket. Voltage as indicated in Division 16 documents.

2.11.2 Thermostat

Line voltage heating only thermostat with non-adjustable set point factory set at 39 degrees F. Provide thermostat with remote bulb mounted outside mechanical room if thermostat is mounted in mechanical room, or provide thermostat with local bulb and weatherproof enclosure if thermostat is mounted outside mechanical room. Voltage as indicated in Division 16, wattage rating suitable for amount of heating cable required.

2.12 AIR SUPPLY SYSTEM

Air supply system shall be in accordance with NFPA 13. The connection pipe from the air compressor shall not be less than 1/2 inch in diameter and shall enter the system above the priming water level of the dry pipe valve. A check valve shall be installed in the airline piping and a shutoff valve of the renewable disc type shall be installed on the supply side of this check valve. The air supply system shall be sized to pressurize the sprinkler system to 40 psi within 20 minutes.

2.12.1 Air Compressor

Compressor shall be single stage oil less type, air-cooled, electric motor driven, equipped with a check valve, shutoff valve and pressure switch for automatic starting and stopping. Pressure switch shall be factory set to start the compressor at 30 psi and stop it at 40 psi. A safety relief valve, set to operate at 65 psi, shall be provided.

2.12.2 Air Pressure Maintenance Device

Device shall be a pressure regulator, which automatically reduces supply air pressure to pressure required to be maintained in the piping system. The device shall have a cast bronze body and valve housing complete with diaphragm assembly, spring, filter, ball check to prevent backflow, 1/16-inch restriction to prevent rapid pressurization of the system, and adjustment screw. The device shall be capable of reducing an inlet pressure of up to 100 psig to a fixed outlet pressure adjustable to 10 psig.

2.12.3 Air Supply Piping System

System shall be configured so that each dry pipe system is equipped with a separate pressure maintenance device, air compressor, shutoff valve, bypass valve and pressure gauge. Piping shall be galvanized steel.

2.12.4 Low Air Pressure Alarm Device

Each dry pipe valve trim shall be provided with a local alarm device consisting of a metal enclosure containing an alarm horn or bell, silence switch, green power-on light, red low-air alarm light and amber trouble light. The alarm device shall be activated by the low air pressure switch. Upon reduction of sprinkler system pressure to approximately 10 psig above the dry valve trip point pressure, the low air pressure switch shall actuate the audible alarm device and a red low-air alarm light. Restoration of system pressure shall cause the low-air alarm light to be extinguished and the audible alarm to be silenced. An alarm silence switch shall be provided to silence the audible alarm. An amber trouble light shall be provided which will illuminate upon operation of the silence switch and shall be extinguished upon return to its normal position.

2.13 FIRESTOPPING

Firestopping materials shall consist of commercially manufactured, asbestos-free material having a flame spread of 25 or less, and a smoke developed rating of 50 or less, when tested in accordance with ASTM E 84 or UL 723. Material shall be an approved firestopping material as listed in UL Fire Resist Dir or by a nationally recognized testing laboratory. Material shall be nontoxic to humans at all stages of application. Firestopping will not be required to have a greater fire resistance rating than that of the assembly in which it is being placed. Penetrations of Fire Resistance Rated Walls, Partitions, Floors, Roof-Ceiling Assemblies and Ceiling-Floor Assemblies shall have an F Rating equal to three hour.

2.14 IDENTIFICATION SIGN

Valve identification sign shall be minimum 6 inches wide x 2 inches high with enamel baked finish on minimum 18 gauge steel or 0.024 inch aluminum with red letters on a white background or white letters on red background. Wording of sign shall include, but not be limited to "main drain," "auxiliary drain," "inspector's test," "alarm test," "alarm line," and similar wording as required to identify operational components.

2.15 CONCRETE

Concrete mix shall be designed to achieve ultimate 28-day minimum strength of

2500 psi for sills, steps on grade, and sidewalks and 3000 psi for all other concrete. Expansion joints for sidewalks and roadway repairs shall be non-extruding type cork or cane fiber bound and impregnated with bituminous material.

2.16 GRASSING

Refer to specification Section 02935 TURF.

2.17 PIPING INSULATION

Heat Traced Piping: Piping insulation shall be Polyisocyanurate Closed-Cell Rigid, ASTM C591, Type IV, K= 0.027 (0.19) or Cellular Glass Closed-Cell, ASTM C552, Density 136 kcm (8.5 pcf) Nominal, K = 0.055 (0.38.). The minimum thickness shall be 2-inches. Insulate fittings, joints, and valves with insulation of like material, thickness, and finish as adjoining pipe. Size large enough to enclose pipe and heat tracer. Cover with aluminum jacket, thickness 0.020 inch, with seams located on bottom side of horizontal piping. Metal jacket bands shall be 3/8 inch wide, 0.015 inch thick aluminum or 0.010 inch thick stainless steel.

PART 3 EXECUTION

3.1 UNDERGROUND PIPING INSTALLATION

The fire protection water main shall be laid, and joints anchored, in accordance with NFPA 24. Minimum depth of cover shall be below the frost line. The supply line shall terminate inside the building with a flanged piece, the bottom of which shall be set not less than 6 inches through the finished side-wall. A blind flange shall be installed temporarily on top of the flanged piece to prevent the entrance of foreign matter into the supply line. A concrete thrust block shall be provided at all elbows and where the pipe penetrates the side-wall. In addition, joints shall be anchored in accordance with NFPA 24 using pipe clamps and steel rods. Buried steel components shall be provided with a corrosion protective coating in accordance with AWWA C203.

3.2 EARTHWORK

Earthwork shall be performed in accordance with applicable provisions of Division 02 EXCAVATION, TRENCHING, AND BACKFILLING FOR UTILITY SYSTEMS.

3.3 ABOVEGROUND PIPING INSTALLATION

All piping shall be arranged to drain to main riser or suitable auxiliary drains or plugged outlets in accordance with NFPA 13. Piping shall be run straight and bear evenly on hangers and supports Coordinate pipe routing with duct routing, equipment locations, electrical installations, and building structural members, offset piping where required, to avoid conflicts. Riser nipples or "sprigs" to upright sprinklers shall contain no fittings between the branch line tee and the reducing coupling at the sprinkler. Riser nipples exceeding 30 inches in length shall be individually supported. Avoid penetrating any main structural beam. Notify Contracting Officer of any conflicts.

3.4 PIPE JOINTS AND REDUCERS

Pipe joints shall conform to NFPA 13, except as modified herein. Not more than four threads shall show after joint is made up. Welded joints will be permitted, only if welding operations are performed as required by NFPA 13 at the Contractor’s Fabrication Shop, not at the project construction site. Grooved pipe and fittings shall be prepared in accordance with the manufacturer’s latest published specification according to pipe material, wall

thickness, and size. Grooved couplings and fittings shall be from the same manufacturer. Reductions in pipe sizes shall be made with one-piece tapered reducing fittings. The use of grooved-end or rubber-gasketed reducing couplings will not be permitted.

3.5 PIPING PENETRATIONS

Cutting structural members for passage of pipes or for pipe-hanger fastenings will not be permitted. Pipes that must penetrate concrete or masonry walls or concrete floors shall be core-drilled and provided with pipe sleeves. Each sleeve shall be Schedule 40 galvanized steel, ductile iron or cast iron pipe and shall extend through its respective wall or floor and be cut flush with each wall surface. The space between the sleeve and the pipe shall be firmly packed with mineral wool insulation. Where pipes pass through firewalls, fire partitions, or floors, a fire seal shall be placed between the pipe and sleeve. In penetrations, which are not fire-rated, or not a floor penetration, the space between the sleeve and the pipe shall be sealed at both ends with plastic waterproof cement, which will dry to a firm but pliable mass, or with a mechanically adjustable segmented elastomer seal.

Escutcheons shall be provided for pipe penetration of ceilings and walls. Escutcheons shall be securely fastened to the pipe at surfaces through which piping passes.

3.6 SPRINKLERS

Sprinklers shall be installed in accordance with their listed spacing limitations. Sprinklers in lay-in tile ceilings shall be centered in tiles. Escutcheons shall be one-piece metallic type with a depth of less than 3/4 inch and suitable for installation on pendent sprinklers. The escutcheon shall have a factory finish that matches the pendent sprinkler heads.

3.7 PAINTING AND PIPE COLOR CODE MARKING OF PIPING FITTINGS, VALVES AND APPURTENANCES

Paint all exposed interior piping; color to be the same as the walls/ceiling or a complementing color. Un-exposed interior piping shall not be painted. Copper and stainless steel piping may be cleaned and left unpainted.

Mark all exposed and un-exposed interior piping, at 20-foot intervals, indicating the type of fluid carried and direction of flow, with plastic wraparound-type pipe labels conforming to ANSI A13.1. Labels are not required on sprinkler system branch lines and pipes less than 2 inches nominal size. Colors for pipes and pipe markings shall be: Red – Letters and Arrows with White – “FIRE PROTECTION WATER” Legend.

Surfaces to be painted, painting systems, and the number of coats to be applied shall be as outlined below. Comply with the manufacturer’s printed instructions.

Fire Sprinkler System: One coat Alkyd Primer, spread rate 425 square feet per gallon, 2.0 mils DFT. Two coats Alkyd Gloss Finish, spread rate 417 square feet per gallon, 2.0 mils DFT.

Fire Hydrants, Backflow Preventer and PIV’s: One coat Gray Alkyd Fast Drying Primer, spread rate 425 square feet per gallon, 2.0 mils DFT. Two coats Alkyd Gloss Finish, spread rate 417 square feet per gallon, 2.0 mils per coat DFT.

3.8 ELECTRICAL HEATING CABLES AND CONTROLS

Install heating cable between pipe and insulation where indicated in accordance

with cable manufacturer's instructions. Bending radius of cable shall be as recommended by manufacturer or six times cable diameter which ever is greater.

Test continuity of heating cable before and after installation of insulation.

3.8.1 Heating Tape Requirements For Pipe

Pipe exposed to outdoor environment and maintained at 39 degrees F for freeze protection of non-flowing medium.

PIPE SIZE Inches	MINIMUM AIR TEMPERATURE Degrees F	REQUIRED HEATING Watts/foot of pipe
1 inch and under	20	0.9
1-1/4 to 2 inch	20	1.2
2-1/2 to 4 inch	20	2.0
6 inch	20	2.7
8 inch	20	3.4
10 inch	20	4.1
12 inch	20	4.7
14 inch	20	5.1
16 inch	20	5.8
1 inch and under	0	1.7
1-1/4 to 2 inch	0	2.5
2-1/2 to 4 inch	0	4.0
6 inch	0	5.5
8 inch	0	6.7
10 inch	0	8.1
12 inch	0	9.5
14 inch	0	10.3
16 inch	0	11.6

3.8.2 Heating Tape Requirements For Valves

Heating tape requirement for indicated valves is equal to heating for one foot of indicated size pipe times factor for given valve type shown below:

VALVE TYPE	REQUIRED HEATING Watts/foot of pipe
Gate	4.3
Butterfly	2.3
Ball	2.6
Globe	3.9

3.9 PIPE INSULATION

Freeze protection of above grade out door piping (over heat tracing tape): 2-inch thick insulation, for all pipe sizes. Provide metal jackets for all pipes exposed to outdoor weather. Jackets may be applied with pop rivets. Provide aluminum angle ring escutcheons at wall, ceiling or floor penetrations. A 2-inch overlap is required at longitudinal and circumferential joints. Install insulation, vapor retarder and jacketing per manufacturer’s recommendations. Particular attention should be paid to recommendations for joint staggering, adhesive application, external hanger design, expansion/contraction joint design and spacing and vapor retarder integrity.

3.10 IDENTIFICATION SIGNS

Signs shall be affixed to each control valve, inspector test valve, main drain, auxiliary drain, test valve, and similar valves as appropriate or as required by NFPA 13. Hydraulic design data nameplates shall be permanently affixed to each sprinkler riser as specified in NFPA 13.

3.11 FIRESTOPPING

Firestopping material shall completely fill void spaces caused by penetrations of pipe through floors and through fire-resistance rated walls, partitions, and ceiling-floor assemblies, vertical shafts such as pipe chases, elevator shafts, utility chutes and any other locations where required to maintain fire resistance rating of the construction regardless of geometric configuration, subject to tolerance established by the manufacturer. Firestopping systems for filling floor voids 4 inches or more in any direction shall be capable of supporting the same load as the floor is designed to support or shall be protected by a permanent barrier to prevent loading or traffic in the firestopped area. Firestopping shall be installed in accordance with manufacturer's written instructions.

3.12 STERILIZATION

After system components have been installed and pressure tested, each portion of the completed system shall be sterilized. After pressure tests have been made, the portion to be sterilized shall be thoroughly flushed with water until all entrained dirt and other foreign materials have been removed before introducing chlorinating material. The chlorinating material shall be hypochlorites or liquid chlorine. Water chlorination procedure shall be in accordance with AWWA M20. The system shall be then flushed with clean water until the residual chlorine is reduced to less than one part per million. Samples of water in properly sterilized containers for bacterial examination will be taken from several system locations. Samples shall be tested for total coliform organisms (coliform bacteria, fecal coliform, streptococcal, and other bacteria) in accordance with AWWA 10062JU. The system will not be accepted until satisfactory bacteriological results have been obtained.

3.13 PRELIMINARY TESTS

The system shall be tested to assure that equipment and components function as intended. Sprinkler piping systems and attached appurtenances subjected to system working pressure shall be tested in accordance with NFPA 13, NFPA 24 and NFPA 25. Upon completion of specified tests, the Contractor shall complete certificates as specified in paragraph SUBMITTALS.

3.13.1 Piping

Water service and sprinkler piping shall be hydrostatically tested in accordance with NFPA 13 at not less than 200 psi or 50 psi in excess of maximum system operating pressure and shall maintain that pressure without loss for 2 hours. There shall be no drop in gauge pressure or visible leakage when the system is subjected to the hydrostatic test. The test pressure shall be read from a gauge located at the low elevation point of the system or portion being tested.

3.13.2 Testing of Alarm Devices

Each alarm switch shall be tested by flowing water through the inspector's test connection. Each water-operated alarm devices shall be tested to verify proper operation.

3.13.3 Main Drain Flow Test

Following flushing of the underground piping, a main drain test shall be made to verify the adequacy of the water supply. Static and residual pressures shall be recorded on the certificate specified in paragraph SUBMITTALS. In addition, a main drain test shall be conducted each time after a main control valve is shut and opened.

3.14 BACKFLOW PREVENTION ASSEMBLY FORWARD FLOW TEST

Each backflow prevention assembly shall be tested at system flow demand, including all applicable hose streams, as specified in NFPA 13. The Contractor shall provide all equipment and instruments necessary to conduct a complete forward flow test, including 65 mm (2.5 inch) diameter hoses, playpipe nozzles, calibrated pressure gauges, and pitot tube gauge. The Contractor shall provide all necessary supports to safely secure hoses and nozzles during the test. At the system demand flow, the pressure readings and pressure drop (friction) across the assembly shall be recorded. A metal placard shall be provided on the backflow prevention assembly that lists the pressure readings both upstream and downstream of the assembly, total pressure drop, and the system test flow rate. The pressure drop shall be compared to the manufacturer's data. The installation shall not be considered accepted until identified discrepancies have been corrected and test documentation is properly completed and received.

3.15 PREVENTION ASSEMBLY PERFORMANCE TEST

Each backflow prevention assembly shall be tested in accordance with standards established by FCCHR-01 - Manual of Cross-Connection Control and as specified in NFPA 13. The Contractor shall provide all personnel and instruments necessary and pay any and all cost required to conduct the test. The installation shall not be considered accepted until identified discrepancies have been corrected and test documentation is properly completed and received.

3.16 FINAL ACCEPTANCE TEST

Final Acceptance Test shall begin only when the Preliminary Test Report has been approved. The Fire Protection Specialist shall conduct the Final Acceptance Test and shall provide a complete demonstration of the operation of the system. This shall include operation of control valves and flowing of inspector's test connections to verify operation of associated water flow alarm switches. After operation of control valves has been completed, the main drain test shall be repeated to assure that control valves are in the open position. In addition, the representative shall have available copies of as-built drawings and certificates of tests previously conducted. The installation shall not be considered accepted until identified discrepancies have been corrected and test documentation is properly completed and received.

3.17 COMMISSIONING

Skilled technicians shall be made available to assist the Contractor and Government’s Representative in completing the commissioning program as it relates to each system and their technical specialty. Work schedules, time required for testing, etc., will be requested and coordinated by the Contractor. Qualified technician(s) shall be available and present during the agreed upon schedules and for sufficient duration to complete the necessary tests, adjustment, and/or problem resolutions. All equipment and system(s) shall be tested as required by NFPA 13 and commissioned as required Government. The Contractor will be responsible to participate in the testing of systems to provide verification of adequate performance. Any fault in material or in any part of the installation revealed by commissioning tests shall be investigated, replaced or repaired by the Contractor and the same test repeated at the Contractor’s expense until no fault appears. Provide all certificates, test documentation, warranty, etc. to Contracting Officer.

3.18 ON-SITE TRAINING

The Fire Protection Specialist shall conduct a training course for operating and maintenance personnel as designated by the Contracting Officer. Training

shall be provided for a period of 4 hours of normal working time and shall start after the system is functionally complete but prior to the Preliminary Tests and Final Acceptance Test. The On-Site Training shall cover all of the items contained in the approved Operating and Maintenance Instructions.

3.19 ELECTRICAL WORK

Alarm signal wiring connected to the building fire alarm control system shall be in accordance with NFPA and existing fire alarm system manufacturer's recommendations. All wiring for supervisory and alarm circuits shall be #14 AWG solid copper installed in metallic tubing or conduit. Wiring color code shall remain uniform throughout the system. Refer to Division 16 ELECTRICAL.

-- END OF SECTION --

SECTION 05500

MISCELLANEOUS METAL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ALUMINUM ASSOCIATION (AA)

AA DAF-45	(1997) Designation System for Aluminum Finishes

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 123/A 123M	(2001) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A 653/A 653M	(2000) Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A 924/A 924M	(1999) General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process
ASTM E 814	(2000) Fire Tests of Through-Penetration Fire Stops

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1	(2000) Structural Welding Code - Steel

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10	(1998; Errata 10-98-1) Portable Fire Extinguishers

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

CID A-A-344	(Rev B) Lacquer, Clear Gloss, Exterior, Interior

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTALS:

SD-02 Shop Drawings

Miscellaneous Metal Items

Detail drawings indicating material thickness, type, grade, and class; dimensions; and construction details. Drawings shall include catalog cuts, erection details, manufacturer's descriptive data and installation instructions, and templates. Detail drawings for the following items: access doors and panels.

1.3 GENERAL REQUIREMENTS

The Contractor shall verify all measurements and shall take all field measurements necessary before fabrication. Welding to or on structural steel shall be in accordance with AWS D1.1. Items specified to be galvanized, when practicable and not indicated otherwise, shall be hot-dip galvanized after fabrication. Galvanizing shall be in accordance with ASTM A 123/A 123M, ASTM A 653/A 653M, or ASTM A 924/A 924M, as applicable. Exposed fastenings shall be compatible materials, shall generally match in color and finish, and shall harmonize with the material to which fastenings are applied. Materials and parts necessary to complete each item, even though such work is not definitely shown or specified, shall be included. Poor matching of holes for fasteners shall be cause for rejection. Fastenings shall be concealed where practicable. Thickness of metal and details of assembly and supports shall provide strength and stiffness. Joints exposed to the weather shall be formed to exclude water.

1.4 DISSIMILAR MATERIALS

Where dissimilar metals are in contact, or where aluminum is in contact with concrete, mortar, masonry, wet or pressure-treated wood, or absorptive materials subject to wetting, the surfaces shall be protected with a coat of bituminous paint or asphalt varnish.

1.5 WORKMANSHIP

Miscellaneous metalwork shall be well formed to shape and size, with sharp lines and angles and true curves. Drilling and punching shall produce clean true lines and surfaces. Welding shall be continuous along the entire area of contact except where tack welding is permitted. Exposed connections of work in place shall not be tack welded. Exposed welds shall be ground smooth. Exposed surfaces of work in place shall have a smooth finish, and unless otherwise approved, exposed riveting shall be flush. Where tight fits are required, joints shall be milled. Corner joints shall be coped or mitered, well formed, and in true alignment. Work shall be accurately set to established lines and elevations and securely fastened in place. Installation shall be in accordance with manufacturer's installation instructions and approved drawings, cuts, and details.

1.6 ANCHORAGE

Anchorage shall be provided where necessary for fastening miscellaneous metal items securely in place. Anchorage not otherwise specified or indicated shall include slotted inserts made to engage with the anchors, expansion shields, and power-driven fasteners when approved for concrete; toggle bolts and through bolts for masonry; machine and carriage bolts for steel; and lag bolts and screws for wood.

1.7 ALUMINUM FINISHES

Unless otherwise specified, aluminum items shall have anodized finish. The thickness of the coating shall be not less than that specified for protective and decorative type finishes for items used in interior locations or architectural Class I type finish for items used in exterior locations in AA DAF-45. Items to be anodized shall receive a polished satin finish. Aluminum surfaces to be in contact with plaster or concrete during construction shall be protected with a field coat conforming to CID A-A-344.

1.8 SHOP PAINTING

Surfaces of ferrous metal except galvanized surfaces, shall be cleaned and shop coated with the manufacturer's standard protective coating unless otherwise specified. Surfaces of items to be embedded in concrete shall not be painted. Items to be finish painted shall be prepared according to manufacturer's recommendations or as specified.

PART 2 PRODUCTS

2.1 ACCESS DOORS AND PANELS

Doors and panels shall be flush type unless otherwise indicated. Frames for access doors shall be fabricated of not lighter than 16 gauge steel with welded joints and finished with anchorage for securing into construction. Access doors shall be a minimum of 14 by 20 inches and of not lighter than 14 gauge steel, with stiffened edges, complete with attachments. Access doors shall be hinged to frame and provided with a flush face, screw driver operated latch. Exposed metal surfaces shall have a shop applied prime coat.

2.2 MISCELLANEOUS

Miscellaneous plates and shapes for items that do not form a part of the structural steel framework, such as lintels, sill angles, miscellaneous mountings, and frames, shall be provided to complete the work.

2.3 ROLL-UP FLOOR MATS

Roll-up mats shall be of aluminum construction with carpet surface. Roll-up mats shall be for use in level surface area.

2.4 FIRE EXTINGUISHER CABINETS

Cabinets shall be of the semi-recessed type suitable for 10 pound extinguishers. Box and trim shall be of heavy gage rolled steel. Door shall be a rigid frame with full length piano type hinge and double strength (DSA) glass panel. Door and panel shall be prime-coated inside and out. Cabinets shall be Potter Roemer (or approved equal) ADA accessible cabinet Model No. 7340.

PART 3 EXECUTION

3.1 GENERAL INSTALLATION REQUIREMENTS

All items shall be installed at the locations shown and according to the manufacturer's recommendations. Items listed below require additional procedures as specified.

3.2 REMOVABLE ACCESS PANELS

A removable access panel not less than 12 by 12 inches shall be installed directly below each valve, flow indicator, damper, or air splitter that is located above the ceiling, other than an acoustical ceiling, and that would otherwise not be accessible.

3.3 INSTALLATION OF FIRE EXTINGUISHER CABINETS

Metal fire extinguisher cabinets shall be furnished and installed in accordance with NFPA 10 where shown on the drawings or specified.

End of Section

DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
NORTHWEST AREA OFFICE
P.O. BOX 92146
TILLICUM, WASHINGTON 98492-0146

REPLY TO
ATTENTION OF

CENWS-EC-NW-MC

31 July 2003

MEMORANDUM FOR RECORD

SUBJECT: Pre-Bid DACA67-03-T-2002, Renovate Buildings, McChord AFB, WA

1. Those in attendance, PLEASE PRINT the following information:

NAME	COMPANY	ADDRESS	PHONE NUMBER
Stephanie Rumley	446MSG	1205 12th St NE ~~1205~~ McChord AFB WA 98438	(253)982-2446
David Moorman	62CES/CECEA		(253)982-2167
Joe Kessler	62CES/CECC		2-5656
Jason Roosa	Wm. Dickson Co.	3315 S. Pine St Tacoma, WA 98409	(253)-472-4489
Mack Zygmoutowicz	WPC	PO Box 1728 Gig Harbor WA	253 851 9309
Sean Craig	Long Services	21414 68th Ave S Kent, WA 98032	253-234-8050
Alejandro Gonzalez	RSCI	1054 E. Lewis	(208)887-1401
Clayton Record	RSCI	"	"

2. Buildings and/or specific areas visited were: 1170, 1205, 1207

3. Additional comments/questions/concerns raised by prospective bidders:
Bidders were advised to refer to paragraph SP-6 in specifications.

Christine Een
Christine Een

CC: CENWS-EC
CENWS-CT

CENWS-EC-NW-FL

SUBJECT: Pre-Bid DACA67-03-T-2002, Renovate Buildings, McChord AFB, WA

1. Those in attendance, PLEASE PRINT the following information:

NAME	COMPANY	ADDRESS	PHONE NUMBER
KEN TEPLEY	WPC	10921 Burnham Dr.	253-851-9309
BARRY PUGH	M&P	SPOKANE, WA	509 535-8874
JERRY POTTER	"	"	"
WALT CLEAR	"	"	"
STEVE NESS	"	"	"
GARY BARBER	RELIANCE FIRE PROTECTION 3706 AIRPORT WAY SOUTH SEATTLE WA 98134		TEL 206 682 6636 FAX 206 682 6744
RON MAIER			
HUGH MARKEY	CORPS OF ENGINEERS	4735 E. MARGINAL WAY S. SEATTLE	206-764-6593
Christine Een	COE	McChord AFB	253-982-3082
Rista Kowzarich	COE	McChord AFB	253982-3760

1. Q:Building 1207, Section 01000, para. (c): There is no comment on the need to reconfigure the existing fire protection piping system. On the drawings for Building 1170 and 1205, it calls out for a new and/or major modification to the existing fire protection system.

There are no Fire Protection drawings currently in the solicitation for Bldg. 1207. With the reconfiguration of the new floor plan, is the Government going to require modifications to the existing system for Building 1207? Or is there no requirement for fire protection for this building?

Please clarify Bldg. 1207 fire protection requirements.

A: Response: There is not a requirement for a fire sprinkler system for Building 1207.

2. Q: All Buildings, Section 01000 Special Conditions, Item 8 states the contractor shall assume that all fluorescent light fixtures and associated ballasts are hazardous (containing PCB's) and bid per the requirements of Section 13281 Lead Hazard Control Activities.

In the drawings on Sheets ASB 1 & 2 of Building 1205 under Specific Notes, Note 4 states approximately 50 on each floor. In the drawings on Sheet ASB 1 Building 1170, under Specific Notes, Note 4 states approximately 50 contain

PCB's. Building 1207 also states the same as Building 1170.

As the contractor, do we assume that there are 200 fixtures that contain PCB's per the drawings? Or per Section 01000 – "All fixtures are to be handled as containing PCB's"?

Please clarify this requirement.

A: Assume all light fixtures contain PCBs and take the fixture count off the electrical demolition drawings.

3. Q: Bldg. 1170, Sheet A-2, Note D under General Notes: Floor pattern shows sandblast existing paint finishes at concrete floor as shown. On Sheet ASB 1 there are no call outs on this floor surface to contain any lead paint or asbestos materials.

Is this floor area to be treated as a concrete surface with no hazardous materials? Or is this floor area to be assumed to contain lead paint (PWL) and/or asbestos mastic? There is a very big difference in pricing this activity.

A: The legend on ASB-1 shows which areas are ACM. Note 6 and 7 address LP. Note 6 states that all painted surfaces are to be treated as PWL (Paint with lead).

4. Q: Bldg. 1170, Sheets A-4 and A-22: Refer to specification Section 13138. Per the manufacturer there is a live load capacity of 125 psf.

Is there a need for concrete footings at all column support locations for the new mezzanine? The existing concrete floor thickness is unknown.

A: No new concrete footings are required at Building 1170 to support the new mezzanine.

5. Q: Bldg. 1205, Sheet A-4, Note #4 Operable wall partitions and enclosure: This activity is an Option Item #27 on the Bid Form. If this Option #27 is not accepted, do all the related support members need to be installed as the base price for Bldg. 1205?

A: No support members specific to the operable partition shall be required if Option Item #27 is not accepted.

6. Q: Bldg. 1205, Section 01000: Para. b states that the bathroom on each floor will be reconfigured to meet ADA accessibility standards. This raises the question on Level #2 (2^{nd} floor): Due to the fact that this building does not have an elevator, is the Government going to waive the need to make Level 2 ADA accessible?

A: Correct—there is no elevator to be installed in the building as determined by the government.

7. Q: Bldg. 1207, Sheet A-3, Room 136: Note 9 calls out for the east wall to remain. The plan would appear that all walls in this room would remain per plan on Sheet A-2.

Should Note 9 on Sheet A-3 apply to the north and west wall also?

A: Metal studs and layer of gypsum board at Mechanical Room 136 to remain at all walls indicated with wall type 008. Outside layer of gypsum board at adjacent rooms to be removed and replaced. Clarification of wall type 008 shall be issued at a later date.

8. Q: Bldg. 1207, Sheet A-6: Wall Type 006 calls out to place 9 ga. wire mesh on 25 ga. existing, and new steel stud wall framing full height. Is 25 ga. framing adequate to hold 9 ga. wire mesh at this location? Metal studs should be 20 ga. at a minimum to support the 9 ga. wire mesh.

A: 25 ga. metal studs are an adequate structural support for this wall system.

9. Q: Bldg. 1207, Section 01000, para c, last sentence: Under slab waste lines to remain. Sheet A-3 shows no wall furring on the interior side of these bathrooms.

Sheet P-4, detail 2 shows new waste and vent piping below floor. With water closets being wall hung, a plumbing chase needs to be about 14".

Please clarify wall type at plumbing walls, both sides of these bathrooms.

A: Section 01000, para. 1 states, "The following items area a brief summary of the project and are provided solely for the purpose of revealing the general nature of the work involved. The Contractor is …." Plate P-2 shows the under slab waste line to be demolished, and Plate P-3 shown the points of connection for the new under slab waste line. The drawings and specifications provide more comprehensive details of the work required for the project.

10. Q: Bldg. 1205, Section 01000, Special Conditions: Para. (b) states that the existing Comm Room is to stay (remain) intact. It also states that the 2 stairwells and the mechanical room are to remain intact, which the Demolition drawings also show on Sheet A-2. On Sheet A-2, the existing Comm Room appears to be demolished. Sheet A-4 calls out for new metal stud framing per details 005 and 006. Per the finish schedule on Sheet A-15, this room calls out for all new finishes.

Please clarify the statement under Section 01000 paragraph b.

A: See reply to question 9, above. Plate A-2 shows that the existing load bearing walls for the stairwell will not be demolished. The communications room will be reconfigured as shown on the drawings, and new finished installed as scheduled on Plate A-15.

11. Q: Bldg. 1170, Section 01000 Special Conditions: Para. (a) states that the existing below slab waste and vent are to remain. Sheet A-2 Note 17 states: "Cut slab to remove existing waste piping and prepare for installation of new piping and plumbing fixtures. Refer to plumbing sheets for details." It would appear that Note 17 is correct, and Sheet A-2 and Section 01000 is incorrect.

Please clarify.

A: See response to question 9, above. Modifications to plumbing will be as shown on the drawings and points of connection to the existing system will be as noted.

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12. Q: In Building 1170, there is security fencing called out. I don't see a specific spec for security fencing. Will one be provided?

A: Diamond mesh partition shall be provided at the E and W entries into Common AGE Storage Rm. 111. See Drawing No. A-15 for construction details. Also, see Specification Section 05500 Wire Mesh Partitions.

13. Q: Section 13138 – Mezzanine Systems, the following is stated in the specifications:

> *"a. The area where mezzanine is installed shall have a concrete slab troweled smooth and level.*
> *b. Concrete areas where mezzanine column placement occurs shall be able to withstand loadings of 125 pounds spread over an 8 inch column over a 14 inch x 14 inch x 1 inch steel base plate."*

Unless otherwise indicated, we assume that the existing slab meets the criteria above, as there is no indication in the drawings for replacement of the existing slab to meet Item "a" above and no extra footings are shown to be installed. I doubt that the mezzanine contractor would know whether the existing slab meets Item "b" above until the design work is actually accomplished.

A: Assume existing slab meets annotated criteria.

14. Q: Building 1205, Sheet A-4, Room 125 shows a "FE" (assume Fire Extinguisher). There are no specifications for fire extinguishers or fire extinguisher cabinets. Please clarify if this item (and other similar references in other rooms and/or buildings) is part of the contract.

A: See Drawing A-1 for "FE" abbreviation and description. See Section 05500 for FE Specification. (Basis of design for Fire Protection equipment - Potter Roemer ABC Multi-purpose Dry Chemical Extinguisher Model No. 3010 10 lb. capacity. Potter Roemer mounting bracket Model No. 3909. Potter Roemer ADA accessible cabinet Model No. 7342 Semi-Recessed-2.)

SHALL APPLY FOR ALL BUILDINGS.

15. Q: Building 1170, Sheet A-2 Ground Level Demo Plan, in the SW corner of existing main room, there is some shelving noted, "Shelving, NIC relocate during construction". Who is responsible for relocating this item?

A. Shelving NIC—existing. GC to remove and reinstall as directed by the CO. Revise note (for clarification) to read "GC will remove and reinstall existing shelving."

16. Q: Building 1170, Sheet A-2, Demo Note 1 and 1A. What is the distinction between 1 – Remove Door, Frame and 1A – Demo Door and Frame?

A: Revise Note 1 to read "Remove existing door, frame and concrete ramp." Doors at note 1A do not have an existing concrete ramp.

17. Building 1170, Sheet A-2, Demo Note 7: According to Demo Note 17, the floor slab in this area is removed, so why is it necessary to do Demo Note 7?

A: The existing slab shall be removed as needed to install the new waste & water piping. Demo only those areas for the new piping; abandon the old piping in place. Plug the abandoned piping with concrete.

18. Building 1170, Sheet A-2, New Work Note 6: New concrete slab is indicated. What is concrete profile required? (concrete thickness, vapor barrier, sand, aggregate base, etc.)

A: Revise last sentence of Note 6 to read "slope new grout bed to drain toward floor drains."

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19. Q: Building 1205, Sheet A-2, Demo Note 2 indicates removal of toilet partitions and accessories in the existing toilet rooms. Building 1170, Sheet A-2, doesn't have this note. Is the removal of the toilet partitions and accessories in building 1170 part of the contract?

A: Building 1170 toilet partitions and toilet accessories shall be demolished as part of this contract. This is typical for all buildings**.**

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20. Q: There are no fire sprinkler plans for Building 1207. Please confirm that Building 1207 is not to have fire sprinklers installed?

A: Bldg. 1207 will not have a fire sprinkler system installed.

21. Q: There are fire sprinkler specifications (13930) for Building 1170 only. Please confirm that these specifications are to be used for Building 1205?

A: No. The specification for Bldg. 1205 includes Section 13930 for the Fire Sprinkler System. This should have been included in the solicitation.

22. Q: Sheets FP-1 & FP-2 for both buildings (sheets 30 to 34) show a "Backflow preventer test hydrant". There is no literature in Wilkins Backflow and this is not an arrangement that it approved for testing backflows, which are tested through the test cocks on the device.

A: We do not agree. The test cocks should be used for water samples only (see NFPA 25, Chapter 9, para. 6.).

a. What is this?

An (22a): This is a forward flow test hydrant to provide a full flow test through the BFP.

b. Please supply a make and model number for these items?

An (22b): See Section 13930, para. 3.6.

---

23. Q: Building 1205 has had a new sloped roof installed over the existing building roof. Are sprinklers to be installed in this void between the old and new roofs?

A: Yes—the base fire department decided that the area must be sprinkled. Section 13930 provides guidance on the design of the fire sprinkler system. The design of the fire sprinkler system is the contractor's responsibility—Section 13930 is a performance specification. The area between the new SSMR and the old BUR must have a fire "dry type" sprinkler system designed by the contractor IAW Section 13930.

24. Q: Building 1207, Sheet A-4. There are no elevations for the east and west walls in the mens & women's restrooms. Is the intention to have the tile installed 5'4" up the east and west walls? The finish schedule on sheet A-8 indicates a vinyl wall covering on all walls in the bathrooms except the west. Please clarify. The same question applies to buildings 1205 and 1170. Is there wall tile on walls where no elevations are detailed?

A: B. 1207: It is our intent to install CT on the wall around the lavatories to a height of 5' 4". This same condition applies to B. 1205 and 1170—all lavatories are to be surrounded by CT.

Make the following changes to the finish schedule:

B. 1205, Sheet A-15; add CT –5 to North and South Walls, for Rooms 113, 115, 219 and 221.

B. 1207, Sheet A-8; add CT—4, 5, & 6 to North and South Walls, for Rooms 103 and 104.

B. 1170, Sheet A-13; add CT—4, 5, & 6 to the North and South Walls, for Rooms 102 and 103.

With the above changes to the Room Finish Schedule you can confirm where wall tile is to be installed.

25. Q: Drawing No. A-1 of Bldg. 1205, note F calls to maintain existing warranties on roof. Please provide the information of the warranty issuer to coordinate and price accordingly.

A: Delete Note F; we are advised that the roof system is now no longer under warranty.

26. Q: Bldg 1205, Sheet A-15 Finish Schedule – The last line labeled 'Stairs' indicates RF-1 for stairs and SL-2 at the landings. The last two lines before Second Floor labeled 'Stair A' and 'Stair B' indicate VCT-1/SL-3. Should any VCT be installed on the stairs?

A: Yes, the stairs should be VCT-1.

27. Q: Spec. Section 01005.1.6.1 specifies the order of the construction. Starting with Bldg. 1170 and ending with 1205. Leaving Option Bid item 0006, blg. 1207, in between these two Base Bid Items. Please confirm that in case Option Item 0006 is not awarded, the contractor will be able to proceed with Bldg. 12-5 immediately after the completion of Bldg. 1170.

A: To be answered by the CoE Seattle and ARFC.

28. Q: Drawings of all three buildings call for Fire Extinguishers, some are bracket mounted and some are to be installed in a cabinet. However, no specifications have been provided for this specialty. Please clarify.

A: For all buildings, refer to Drawing A-1 for "FE" abbreviation and description. Refer to plans for locations. For included FE specification, see Section 05500. (Basis of design for Fire Protection equipment - Potter Roemer ABC Multi-purpose Dry Chemical Extinguisher Model No. 3010 10 lb. capacity. Potter Roemer mounting bracket Model No. 3909. Potter Roemer ADA accessible cabinet Model No. 7342 Semi-Recessed-2.)

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29. Q: Building 1205, Sheet A-19 1st Floor Door Schedule indicates that 122C (operable partition is 2' x 8'. This doesn't track with the Floor Plan A-4 which shows the door to be around 27' long. The 2' x 8' dimension doesn't track with the doors that close the enclosure where the operable partition stores, as the opening is shown on A-4 to be 2'9" with a pair of doors. Please clarify the size of accordion door and the size and call-out for the accordion door pocket.

A: Provide 14 equal panel spaces across the unit width. Total length of the partition opening is drawn at 26'-8 ¾". This size shall be field verified. Door pocket dimensions are as shown. Door schedule clarification shall be submitted as a supplementary drawing at a later date.

30. Q: Building 1205, Detail 1/A-19 shows the operable partition abutting a GWB wall on both ends. According to the floor plan, A-4, this partition should butt a GWB wall on one end and the closed enclosure doors on the other, otherwise you have almost 6' of operable partition inaccessibly installed in the enclosure pocket.

Hmmmm. Clarification required????

A: Detail 1?A-19 must be revised. A door pocket should have been shown. A supplemental drawing will be issued for Sheet A-19.

31. Q: Building 1205, A-9: What are the various ceiling heights? 8'-0" u.n.o.?

A: Refer to Finish schedule for ceiling height information.

32. Q: Building 1205, Sheet A-5, reference Interior Elevation 8/A-18. The reference also indicates that the detail is typical at all windows. Elevation 8/A-18 is base detail. Do you want base at all windows and if so, to what extent?

A: Interior Elevation 8/A-18 is incorrectly noted on Sheet A-5.

33. Q: Building 1205, what is the species of wood required for window sills, base and chair rail?

A: Refer to Specification Section 06410 for base and trim wood species. Provide oak lumber for window sill.

34. Q: Building 1205, Detail 10/A-20 shows a sill, but no information is provided about the sill is noted. Please provide construction info about the sills.

A: Add an additional note to Detail 3/A-20 for plastic laminate. The sill and apron are wood with plastic laminated.

35. Q: Building 1205, Door Schedule A-19, Door 130 is shown to be a pair of 3'0" doors. The frame specified is a F2, which is for a single 3'0" door. Please clarify the type of frame required. Similar problem with Door 202 on Sheet A-20.

A: Doors 130 and 202 are correctly marked on the Door Schedule as a pair of 3'-0" doors. Deleted the dimension for the frame width and provide a HM Frame for the pair of 3'-0" doors.

36. Q: Building 1205, Sheet ASB-1, Legend for Floor Materials, and Rooms 113 and 115. According to the legend, the grout bed contains asbestos and presumably needs to be removed. Sheet A-2, Demo Note 4 indicates that the grout bed is to remain. 2nd Floor is indicated in the same way. Due to the revisions in plumbing, it appears that the mortar bed should be removed, whether asbestos or not and replaced to conform to the new plumbing layout. Please let us know what you want bid.

A: Change Demo Note 4 to read: "Remove ceramic floor tile and mortar bed…."

37. Q: Building 1205, Sheet ASB1 & 2, Specific Notes – Asbestos, LBP, PWL, and

PCB's Abatement Drawing, Note 8 A. The second sentence states, "Contractor shall remove and dispose of floor tile and associated mastic/adhesive that is concealed beneath metal or wood wall/door partitions." We assume that the walls shown to remain on the demo plans Sheets A-2 and A-3 have taken into account this statement. If not, we believe that this statement puts the burden on the contractor to possible remove partitions shown to remain. Please clarify.

A: Only remaining walls indicated on Sheets A-2 and A-3 are structural walls. Hidden floor tile and associated mastic/adhesive are <u>not</u> anticipated at these locations.

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38. Q: **Building 1207, Sheet A-12, 1/A-12, 2/A-12**. These two details have references to Detail X/A-X. Please clarify these details as I don't have sheets A-X, nor is a sheet like this listed.

A: Change Detail X/A-X to read 4/A-12, similar. This is a left hand versus right view of a similar condition.

39. Q: Building 1207, Detail 4/A-12, a dimension needs to be provided for the front to rear of this shelving. The width is shown on Detail 3/A-12.

A: Depth of Shelving should have been dimension 4'-0".

40. Q: Building 1207, Sheet A-3, New Work Note No. 14, states, "Provide new wood base and chair rail…" This note is referenced in Room 132. According to Sheet A-8, Room 132 gets rubber base and there is no mention of chair rail. According to Sheet A-8, Room 143, this room gets wood base and chair rail according to Note 10. These appear to be conflicts between the floor plan and room finish schedule. Please clarify which room(s) get the wood base and chair rail.

A: Rooms 123 and 132 are to receive wood base as shown on Detail 8/A-11. Change the finish schedule on A-8 for rooms 123 and 132 to have WD-1 in lieu of RB-1. On plate A-3 change Note 14 to read "Provide new wood base; see Detail 8/A-11 for details.

41. Q: Building 1207, Sheet A-10, Door Schedule, Opening 127 is a hollow metal cased opening, but this conflicts with the referenced head and sill details H4 & S7, which clearly do not show hollow metal. Please indicate which is correct.

A: Delete HM from the Room 127 on the finish schedule shown on A-10.

42. Q: Building 1207, Sheet A-11, Det. 4/A-11, window sills and Section 06200, what species of wood is desired for these.

A: See Table I, page 4, Section 06200A.

43. Q: Building 1207, Detail 4/S-2 showing the section for the new mechanical yard. There is no indication of gravel under the slab, however, Section 03307 refers to a vapor barrier (also not shown) over gravel. Please clarify if the slab is to be poured on grade as shown. If gravel is required, we need to know thickness required. If vapor barrier is required, please clarify.

A: Detail is correct—there is no gravel under the slab. Therefore, a vapor barrier will not be required. Subgrade shall be compacted and inspected by the government prior to placement of the concrete.

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44. Q: Building 1170, Section 07410

a. Paragraph 1.3 seems to require many tests, which may be cost prohibitive on this project. Are these tests required to be performed as a part of this project?

An (44a): The tests are not a part of the project, but are tests that the manufacturer should have conducted of their product.

b. Paragraph 2.1, for example, indicates that the metal wall panels be factory finished. It is highly doubtful that the panels can be factory finished at a reasonable cost, to match the existing (spray painted many, many times) panels. Is the intent to have a factory finish solely as a primer and that the panels be painted to match the existing panels?

An (44b): We concur. The wall panels should have a "paint grip" finish and field painted after installation to match the color of the existing panels.

c. Along those same lines, are the interior liner panels to be painted?

An (44c): We concur. The interior panels should have a "paint grip" finish and be painted after installation to match interior finishes of the existing panels (color selection to be approved by the government).

45. Q: Building 1170, Detail 4/S-2 shows a canopy at this new door location. Since the floor plan (A-3) and the applicable exterior elevations (A-6) do not show this canopy, we assume that the canopy is not required under this contract. Are we correct?

A: No—the canopy is not a part of the contract and should have been noted as such in this detail (i.e. Canopy NIC).

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46. Q: Building 1205, Sheet A-2, Demo Note 2 indicates removal of toilet partitions and accessories in the existing toilet rooms. Building 1170, Sheet A-2, doesn't have this note. Is the removal of the toilet partitions and accessories in building 1170 part of the contract?

A: In response to RFI # 3, B. 1170, toilet partitions.

The legend on Plate A-1 shows that all existing wall and partitions are to be demolished. Plate A-3 shows the new work plan, including the new toilet partition layout. Plate A-8 addresses the new toilet partitions.

Following Qs: RE Building number 1207

47. Q: Drawing A-3, in-fills @ CMU walls are marked as wall type 003. Wall type 003 is marked as existing CMU. Must we use CMU for in-fills at these locations or may we use 25 Ga. Metal studs?

A: Concur. Metal studs are an acceptable infill at openings into CMU walls.

48. Q: Drawing A-3, north wall, room 136 mechanical is marked s existing wall with new finish on corridor side. Sheet A-2 shows this wall as being removed. Please clarify.

A: Do not concur. Wall is not indicated to be removed. Wall finish at North side shall be removed and replaced.

49. Q: Same question as number 2 above for building 1205.

A: Concur. The determination must be ascertained in the field in coordination with the contracting officer if the existing floor is not sufficiently level to receive designated floor finishes. Some scraping and leveling expected in areas of carpet and vinyl flooring removal. Allow 3% of floor area for this work.

50. Q: Drawing A-4, there are two elevations 5/A-4. Please Clarify.

A: Concur. Elevation notes revised.

51. Q. Drawing A-3, note 10 indicates this area was Ceramic Tile, yet Drawing ASB-1 indicates this area was floor tile not C.T.. Should not 10 on Drawing A-3 refer to rooms 135 janitor and 138 closets?

A: Concur.

52. Q: Drawing A-3 can we assume that the footprint for the old women's toilet room will provide the recess needed to provide C.T. at new toilet rooms 104 and 103?

A: Do not concur. Footprint of existing women's toilet room does not align with the new women's toilet room. Refer to demolition plans for existing floor plan.

53. Q: Will demo of existing concrete floor slab be required?

A: Concur. Demolition of concrete topping will be required so as to prepare for new ceramic tile flooring. Coordinate with plumbing drawings for demolition of concrete slab as required for installation of new plumbing piping.

54. Q: Will fill of portions of the existing recess be required?

A: Concur. Janitor 135 shall require leveling compound to receive new VCT. Noted for clarification.

55. Q: Will building sections showing floor and roof elevations be provided?
We need something that will tell us, for example what the height of the 1" rigid insulation, studs and drywall will be on exterior walls. There is some information on Drawing ASB-2, note 1. Please clarify.

A: Concur. Note will be added for clarification.

General note. It would be helpful if we were provided the specifications for the Asbestos Abatement and Lead Paint at this time.

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56. Q: I don't find anywhere where the re is a clear statement that states that we are to paint the complete exteriors of the buildings. The finish schedules, specs and color schedules refer to exterior painting, but you could infer that we are painting new or revised surfaces only.

Are we to paint the complete exterior of buildings, less prefinished metal wall and or/roof panels?

A: Paint only new and revised surfaces as indicated on the drawings and in the specifications.

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57. Q: Building 1170, Sheet A-3, New Work Note #14, states to provide metal panel wainscot up to underside of existing ceiling deck at <u>all</u> walls, except east wall which should go to the top of the hanger doors.

a. The hanger doors are not elevated anywhere. What is the height of the hanger doors?

An (57a): Refer to structural drawings.

b. Note 14 is indicated on the floor plan in six locations. It does NOT point to the West or North interior walls where offices are being constructed. We assume that this means that the liner panel is not required above the offices. Is this correct? (Note: Sheet A-4 doesn't clarify this and the Room Finish Plan on A-13 only shows the panels on the South and West walls, which is true for that room, but the office rooms only show the finishes below the ceiling.)

An (57b): Please bid as shown.

58. Q: Building 1170, Sheet A-3, Room 104. The raised access floor appears to be 6" above the existing floor. Are the two entrances to the room, ramps or steps? It seems that steps would be more appropriate, as there isn't enough lineal footage for ramps to follow the specified 1" in 12" slope. Please clarify.

A: Steps

End of Questions and Answers

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